SCAG

COMMERCIAL MOWER

TECHNICAL MANUAL

MODELS

ST 12B Tractor
ST 13KA Tractor
ST 17KA Tractor
ST 18 KH Tractor

SLM 40T Cutter Deck
SLM 48T Cutter Deck
SM 48 Cutter Deck
SM 61 Cutter Deck

Scag Power Equipment, Inc.
1000 Metalcraft
Mayville, Wi 53050

Revised 11-87
Part No. 01001
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WARNING

If incorrectly used, this machine can cause severe injury. Those who use and maintain the machine should be trained in its proper use, warned of its dangers, and should read the entire manual before attempting to set up, operate, adjust or service the machine.

LIMITED WARRANTY–COMMERCIAL EQUIPMENT

This warranty extends to the original retail purchaser only and commences on the date of original retail purchase.

Any part of the Scag commercial mower manufactured by Scag and found, in the reasonable judgment of Scag, to be defective in material or workmanship, will be repaired or replaced by an Authorized Scag Service Dealer without charge for parts and labor.

The Scag mower including any defective part must be returned to an Authorized Scag Service Dealer within the warranty period. The expense of delivering the mower to the dealer for warranty work and the expense of returning it back to the owner after repair or replacement will be paid for by the owner. Scag's responsibility in respect to claims is limited to making the required repairs or replacements, and no claim of breach of warranty shall be cause for cancellation or rescission of the contract of sale of any Scag mower. Proof of purchase will be required by the dealer to substantiate any warranty claim. All warranty work must be performed by an Authorized Scag Service Dealer.

This warranty is limited to one year from the date of original retail purchase for any Scag mower that is used for commercial purposes, or any other income–producing purpose (90 days for rental use).

This warranty does not cover any mower that has been subject to misuse, neglect, negligence, or accident, or that has been operated in any way contrary to the operating instructions as specified in the Technical Manual. The warranty does not apply to any damage to the mower that is the result of improper maintenance, or to any mower or parts that have not been assembled or installed as specified in the Technical Manual.

The warranty does not cover any mower that has been altered or modified so as to adversely affect the product's operation, performance or durability or that has been altered or modified so as to change the intended use of the product. In addition, the warranty does not extend to repairs made necessary by normal wear, or by the use of parts or accessories which, in the reasonable judgment of Scag, are either incompatible with the Scag mower or adversely affect its operation, performance or durability. This warranty does not cover engines, electric starters, batteries, belts and tires which are warranted separately by their manufacturer and for a different period of time.

Scag Power Equipment reserves the right to change or improve the design of any mower without assuming any obligation to modify any mower previously manufactured.

All other implied warranties are limited in duration to the one (1) year warranty period or ninety (90) days for mowers used for rental purpose. Accordingly, any such implied warranties including merchantability, fitness for a particular purpose, or otherwise, are disclaimed in their entirety after the expiration of the appropriate one–year or ninety day warranty period. Scag's obligation under this warranty is strictly and exclusively limited to the repair or replacement of defective parts and Scag does not assume or authorize anyone to assume for them any other obligation. Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.

Scag assumes no responsibility for incidental, consequential or other damages including, but not limited to, expense for gasoline, expense of delivering the mower to an Authorized Scag Service Dealer and expense of returning it back to the owner, mechanic's travel time, telephone or telegram charges, rental of a like product during the time warranty repairs are being performed, travel, loss or damage to personal property, loss of revenue, loss of use of the mower, loss of time or inconvenience. Some states do not allow the exclusion or limitation of incidental or consequential damages. So the above limitation or exclusion may not apply to you.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

IMPORTANT

Your mower was built to the highest standards in the industry. However, your mower is only as safe as the operator. Carelessness or error on the part of the operator may result in serious bodily injury. Hazard control and accident prevention are dependent upon the awareness, concern, prudence, and proper training of the personel involved in the operation, transport, maintenance, and storage of the equipment. Make sure every operator is properly trained and thoroughly familiar with all of the controls before operating the equipment.

SAFE OPERATION PRACTICES FOR RIDING VEHICLES

1. Know the controls and how to stop quickly.READ THIS TECHNICAL MANUAL and instructions furnished with attachments. A replacement manual is available by sending complete model and serial number to:

   SCAG Power Equipment, Inc.
   1000-Metalcraft Dr.
   Mayville,Wi 53050

2. Do not allow children to operate the machine. Do not allow adults to operate it without proper instruction.
3. Do not carry passengers. Do not mow when children and others are around.
4. Clear the work area of objects (wires, rocks, etc.) that might be picked up and thrown.
5. Disengage all attachment clutches and shift into neutral before attempting to start the engine.
6. Disengage power to attachments and stop the engine before leaving the operator's position.
7. Disengage power to attachments and stop the engine before making any repairs or adjustments.
8. Disengage power to attachments when transporting or not in use.
9. Take all possible precautions when leaving the vehicle unattended, such as disengaging the power-take-off, lowering the attachments, setting the parking brake, stopping the engine, and removing the key.
10. Do not stop or start suddenly when going uphill or downhill. Mow up and down the face of steep slopes; never across the face.
11. Reduce speed and exercise extreme caution on slopes and in sharp runs to prevent tipping or loss of control. Be especially cautious when changing direction on slopes.
12. Stay alert for holes, rocks, and roots in the terrain and other hidden hazards. Keep away from drop-offs.
13. Use care when pulling loads or using heavy equipment.
    a. Use only approved drawbar hitch points.
    b. Limit loads to those you can safely control.
    c. Do not turn sharply. Use care when backing.
    d. Use counterweights or wheel weights when suggested in this technical manual.
14. Watch out for traffic when crossing or near roadways.
15. When using any attachments, never direct discharge of material toward bystanders nor allow anyone near the vehicle while in operation.
16. Handle gasoline with care - it is highly flammable.
    a. Use approved gasoline container.
    b. Never remove the fuel cap of, or add gasoline to, a running or hot engine or an engine that has not been allowed to cool for several minutes after running. Never fill the tank indoors and always clean up spilled gasoline.
    c. Open doors if the engine is run in the garage-exhaust fumes are dangerous. Do not run the engine indoors.
17. Keep the vehicle and attachments in good operating condition, and keep safety devices and shields in place and in working condition.
18. Keep all nuts, bolts, and screws tight to be sure the equipment is in safe working condition.
19. Never store the equipment with gasoline in the tank inside a building where fumes may reach an open flame or spark. Allow the engine to cool before storing in any enclosure.
20. To reduce fire hazard, keep the engine free of grass, leaves or excessive grease.
21. The vehicle and attachments should be stopped and inspected for damage after striking a foreign object, and the damage should be repaired before restarting and operating the equipment.
22. Do not change the engine governor settings or overspeed the engine.
23. When using the vehicle with mower, proceed as follows:
    a. Mow only in daylight or in good artificial light.
    b. Never make a cutting height adjustment while the engine is running if the operator must dismount to do so.
    c. Shut the engine off when removing the grass catcher or unclogging chute.
    d. Check the blade mounting bolts for proper tightness at frequent intervals.
24. Under normal usage, the grass catcher bag material is subject to deterioration and wear. Check bag frequently for deterioration and wear and replace worn bags. Check that replacement bags comply with the original manufacturer's recommendations or specifications.
25. Disengage power to mower before backing up. Do not mow in reverse unless absolutely necessary and then only after observation of the entire area behind the mower.
26. The discharge chute must be installed and in the down

position on the side discharge cutting unit except when optional grass catcher is completely installed. If the cutting unit discharge ever plugs, shut engine off and wait for all movement to stop before removing obstruction.

27. Perform only those maintenance instructions described in this manual. If major repairs are ever needed or assistance is desired, contact an Authorized Scag Servicing Dealer. To ensure optimum performace and safety, always purchase genuine SCAG replacement parts and accessories. NEVER USE "WILL FIT" replacement parts and accessories made by another manufacture. Use of unapproved replacement parts may void the warranty.

WARNING

DO NOT travel straight down slopes exceeding 14 degrees (25 percent). When the tires begin to slip while climbing a steep slope, the grade is too steep for safe operation. Angle the mower to a less steep slope until tires stop slipping and traction is regained. Raising the cutter deck slightly will improve traction.

ASSEMBLY INSTRUCTIONS

1. Remove all crating and packing materials.
2. Lay out loose bolts and nuts according to the "Where Used" as listed in the loose parts packing list.
3. Set the cutter deck level, about two inches off the floor.
4. Remove belt cover. Remove mower engage control rod.
5. Move tractor assembly to cutter deck so that mounting brackets clear engine deck.
6. Unwind winch lift cable and tilt engine deck to horizontal position. Align the lower set of holes in the mower deck brackets and insert drift pins on each side to temporarily locate holes.

IMPORTANT

7. Use lower set of holes in brackets for mowing two inches and above (for under two inches, use upper set of holes). Insert six 7/16-14 x 1 bolts, flat washers, lock washers and nuts. Tighten all six bolts very securely. Then go back and retorque each one.
8. Raise cutter deck using lift winch and assemble front caster wheels using six 5/16-18 x 3/4 bolts, lock washers and nuts.
9. Install the mower engagement control rod. Secure with hair pin cotter at both ends.
10. Route blade drive belt over center spindle pulley. Be sure belt clears the belt guide saddle at center spindle and is positioned between the pulley and its belt guide at the center pulley support bracket.
11. Push mower engagement lever forward until it snaps to rest. Adjust belt tension as specified in adjustment sections. Do Not Adjust Too Tight!
12. Install grass discharge deflector chute using two (2) 5/16-18 x 1 bolts and elastic stop lock nuts.
13. Place seat assembly on the seat support spring using two 3/8-16 x 3/4" bolts and lock washers. Seat can be positioned forward or backward for operator comfort.
14. If so equipped, Adjust arm rests to horizontal position (if necessary) by turning setscrew in rear of each arm.
15. Insert steering handle on shaft and secure with one 5/16-18 x 1-1/2 bolt, 2 washers and a locknut. Tighten securely.
16. Reduce tire pressure to values specified in adjustments section.

NOTE: Tires are over inflated for shipping purposes.

WARNING: Severe chemical burns may result from improper handling of battery electrolyte. Contact a physician immediately!

WARNING: A battery being charged gives off explosive gases. Sparking can be minimized by connecting the positive cable first, covering the connection with the rubber boot then connecting the negative cable.

17. Remove battery and fill each cell with electrolyte (1.265 specific gravity, battery grade) to level indicator. Do Not Fill more than 3/16" above plates. Allow battery to set for 20 minutes. Refill to level. Battery may be placed on charge at 3 amperes for maximum capacity (not usually necessary). Wash off battery (using baking soda) to remove any spilled acid.
18. Reinstall battery.
19. Check engine crankcase. It was filled at the factory, but may need additional oil for proper level.
20. Fill fuel tank.
21. Open shut-off under tank.
22. After initial run and inspection of cutter belt, replace belt cover.

ADJUSTMENTS

BELT GUIDES

Check that all belts clear their belt guides by about 1/8 to 3/16 inch. Adjust guides if necessary.

DRIVE BELTS

CUTTER DECK DRIVE

Adjust blade drive belt by turning turnbuckle so that about 10 lb. pull sideways deflects belt 1/2 inch. Do Not Overtighten! Only a moderate force should be used on control lever.

BLADE DRIVE

Adjust cutter deck belt by turning lock nut on "J" pull rod where applicable. About 10 lbs. pull sideways deflects belt 1/2 inch. Test belt at short section between center spindle and left hand spindle (do not test long section at rear of deck).

IMPORTANT: Readjust new belt tensions after 4 hours of operation and again after about 24 hours to take up initial stretch and wear.

TRACTION DRIVE

This belt is spring loaded and does not require a tensioning adjustment.

NEUTRAL STOP AND INITIAL CARBURETOR ADJUSTMENTS

Transaxle shifter neutral may require adjustment so that starter engages at neutral stop. Rotate swivel joint if necessary to lengthen or shorten the shift rod.

1. Set parking brake before starting engine.
2. Please Remember: To start engine, three safety switches must be activated:
   a. The shift lever must be in neutral.
   b. The mower engage lever must be pulled all the way back (and held there).
   c. The left foot safety switch pedal must be depressed.
3. Run new engine at half speed about 5 minutes before applying any load.
4. Adjust fuel-air mixture valves according to specifications in engine manual.
5. To release parking brake, depress right hand foot pedal, lift brake lever and rotate 90 degrees and release foot pedal.
6. Readjust shift lever for proper neutral, if necessary.

CLUTCH/BRAKE CONTROL

Three adjustments must be made together and in proper sequence or improper operation and possible damage to the clutch cable, brake cable, pulley, and or brake sytem may result.

1. With parking brake released adjust foot pedal so that it is 3 1/2" - 4" above foot rest (see fig.1). HINT Use a 2x4 board on edge between pedal and foot rest for approximate positioning. Adjust foot pedal position by adjusting the two cable mounting nuts located on each end of the cable housing.

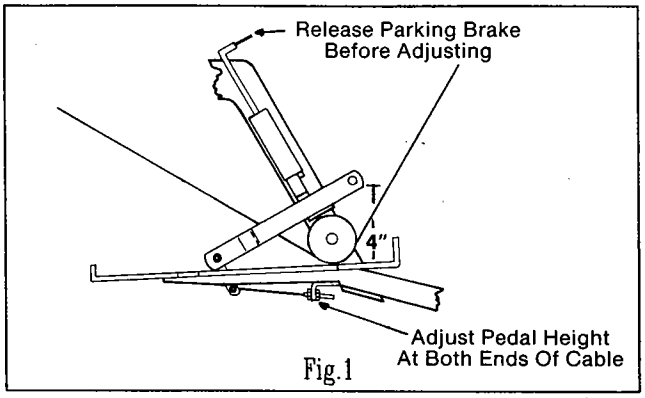


Fig.1

2. Brake must be adjusted in following sequence: With the clutch/brake pedal released (foot pedal in the up position or tension on the transaxle belt) move brake cable pulley (see fig.2) fore or aft in its slot to permit transaxle brake lever to rest against its stop (see fig.3).

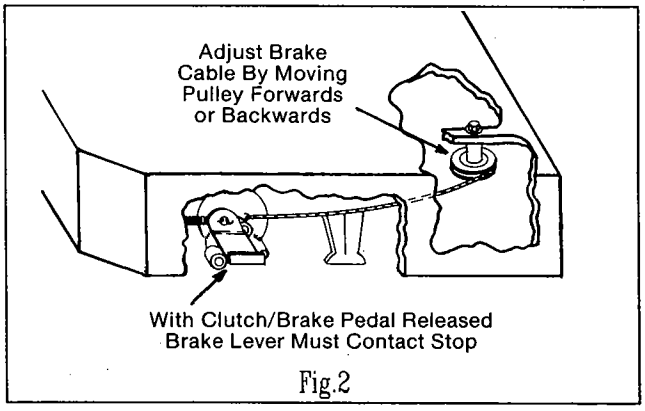


Fig.2

3. Then adjust brake lever nut to permit free movement of lever about 1/8 inch from stop by pushing lever with hand pressure. (Pads must not "drag" on brake disc when adjusted.) If brake lever is too tight, shifting may be impossible and brake wear will be excessive.

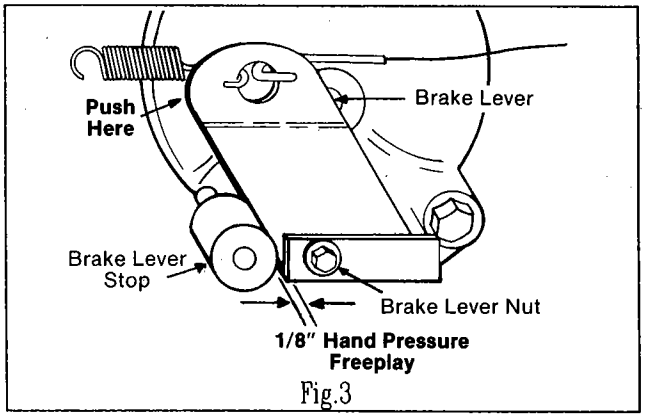


Fig.3

cont'd

TIRE PRESSURES

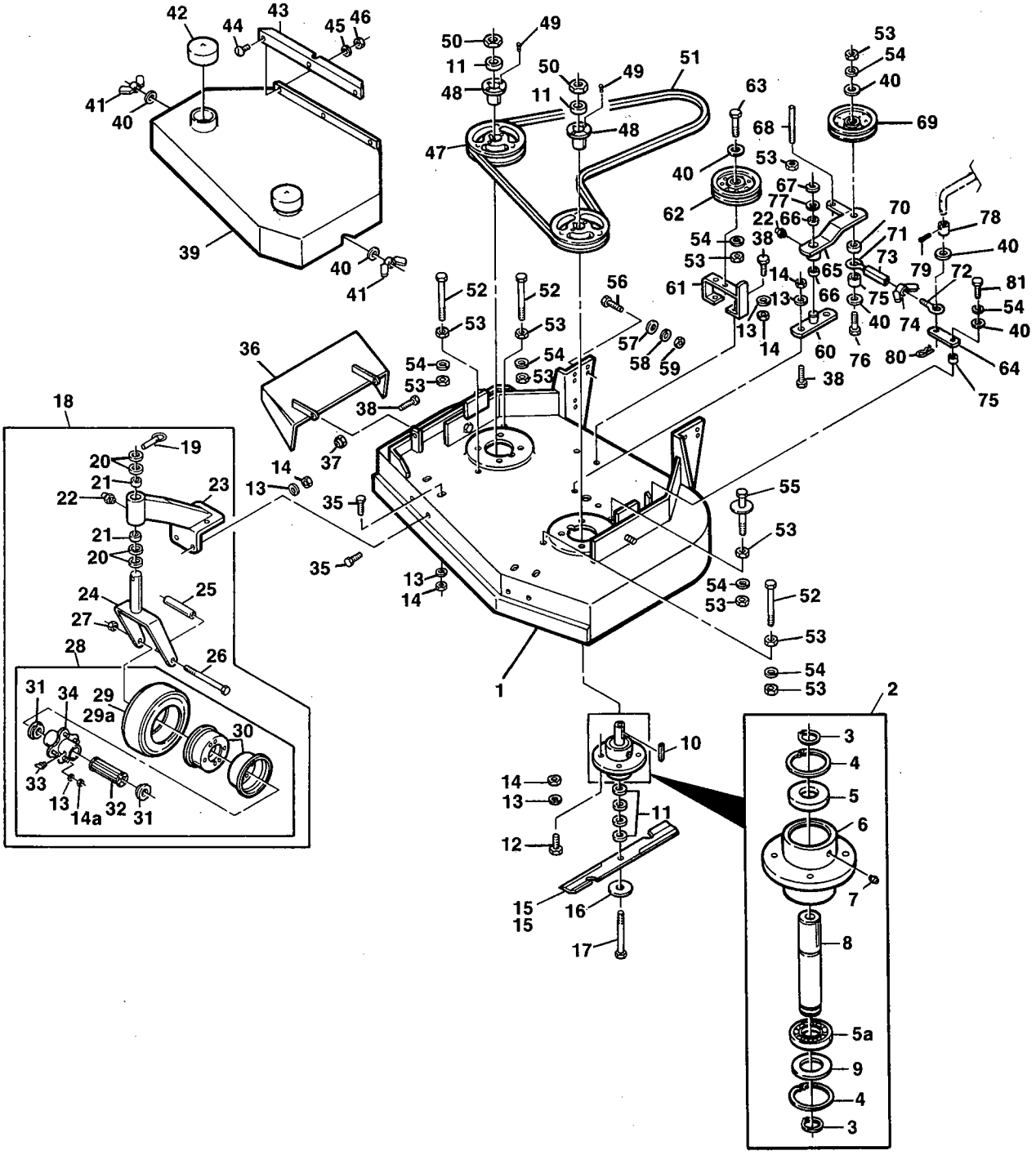
Caster Wheels	25 PSI
Rear Steering Wheel	25 PSI
Drive Wheels	15 PSI

LUBRICATION & MAINTENANCE

8 HOURS (DAILY)	40 HOURS (WEEKLY)	100 HOURS (BIWEEKLY)	200 HOURS (MONTHLY)	PROCEDURE	COMMENTS
X				Check engine oil	Do not over fill
X				Clean blower screen	MORE OFTEN IF NECESSARY
X				Clean debris under belt cover	
X				Sharpen cutter blades	
*				Grease spindle bearings	US Lithium MP White Grease 2125
	X			Change engine oil	Per manufacture's Specifications
	X			Check battery acid level	Distilled water only
	X			Clean air filter	
	X			Check tire pressure	Adjust as required
		X		Grease caster wheel bearings	Chassis grease
		X		Grease caster wheel pivots	Chassis grease
		X		Grease idler pulley pivots	Chassis grease
		X		Remove hubs from axle & grease	Anti-sieze compound
			X	Clean and Adjust spark plugs	See engine mfg information
			X	Adjust Brake lever freeplay	See Adjustments Clutch/Brake step 3
			X	Grease rider frame pivot	Chassis grease
			X	Grease control bell crank	Chassis grease
			X	Grease Left axle bearing	Chassis grease
			X	Grease steering handle	Chassis grease
			X	Grease foot pedal	Chassis grease
			X	Grease rear wheel pivot vertical	Chassis grease
			X	Grease rear wheel bearing	US Lithium MP White Grease 2125
			X	Lubricate idler pulley cam links	LPS type lubricant

* Depending on climate and enviroment
lubrication may be required every 8 to 40 hours.
Do not over grease as this may damage seal.

SLM 40" CUTTER DECK



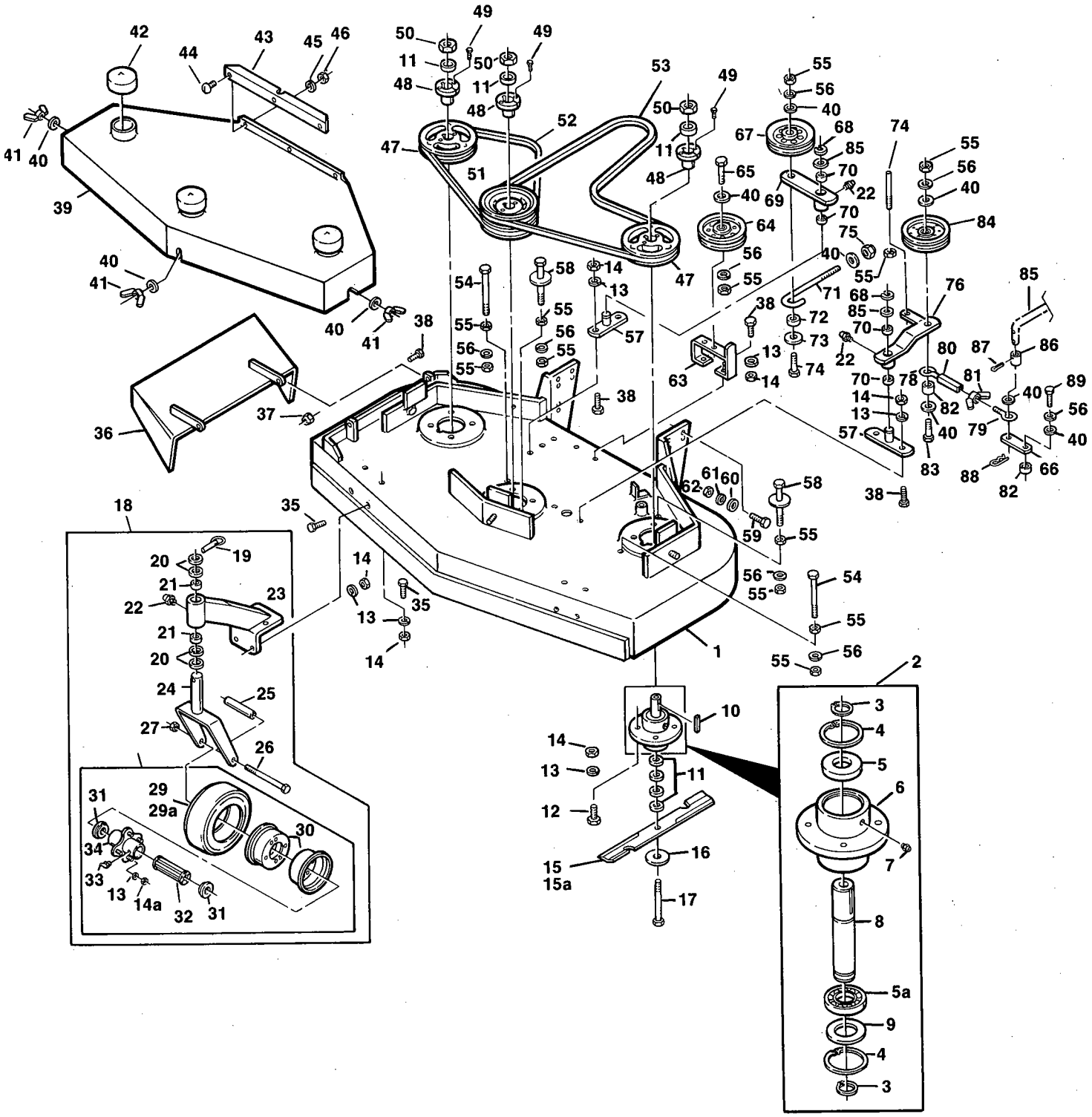
SLM 40 CUTTER DECK

SEE PAGE 8 FOR ILLUSTRATION

REF. NO.	PART NUMBER	DESCRIPTION	SLM40
1	46146	Cutter Deck Wld. (incl. Decals)	x
2	46020	Cutter Spindle Assy.(incl 3-9)	x
3	04050-04	Retaining Ring, 1" Ext.-Inverted	x
4	04050-07	Retaining Ring, 2-7/16 Int-Basic	x
5	48101-01	Bearing, Cutter Spindle upper	x
5A	48101-02	Bearing, Cutter Spindle lower	x
6	41001	Spindle Housing	x
7	48114-02	Grease Fitting, Str. 5/16 Serr.	x
8	43001-02	Spindle, Cutter Blade	x
9	04041-02	Washer, 1-15/16 x 2-13/32 x 16 Ga.	x
10	04063-08	Key, 1/4 x 1/4 x 2	x
11	43038	Spacer, Cutter Blade	x
12	*	Hex Head Bolt, 5/16-18 x 1-1/4	x
13	*	Lockwasher, Spring, 5/16	x
14	*	Hex Nut, 5/16-18	x
14A	*	Hex Nut, 5/16-24	x
15	48109	Cutter Blade, 20" Std.	x
16	04040-10	Flat Washer, 5/8W	x
17	04001-41	Hex Head Bolt, 5/8-11 x 9-1/2	x
18	46079	Caster Assy. (Incl. 19-28)	x
19	04066-01	Quick Pin	x
20	43037-01	Spacer, Caster Yoke, 1/2 Long	x
21	48100-01	Bronze Bearing	x
22	48114-01	Grease Fitting, Str. 1/4-28	x
23	46082	Support Assy. (Incl. 21-22)	x
24	45006	Caster Yoke Wld.	x
25	43022	Sleeve, Caster Wheel Bearing	x
26	04001-37	Hex Head Bolt, 1/2-13 x 5-1/2	x
27	*	Hex Locknut, 1/2-13	x
28	48307-01	Wheel Assy. (Incl. 13-14,29-34)	x
29	48307-02	Tire Only, Caster Wheel	x
29A	48006-03	Inner Tube Only, Caster Wheel	x
30	48006-04	Rim Pair, Caster Wheel	x
31	48006-07	Retainer, Bearing, Caster Wheel	x
32	48006-06	Roller Bearing, Caster Wheel	x
33	48114-03	Grease Fitting, 45 ^{0} 1/4-28	x
34	48006-05	Hub Assy. w/Bolts, Caster Wheel	x
35	*	Hex Head Bolt, 5/16-18 x 3/4	x
36	45029	Discharge Chute Wld.	x
37	*	Hex Nut, 5/16-18 Elastic Stop	x
38	*	Hex Head Bolt, 5/16-18 x 1	x
39	46147	Belt Cover Assy. (Incl. Decals)	x
40	*	Washer, 25/64 x 15/16 x 12 Ga.	x
41	04022-04	Wing Nut, 3/8-16	x
42	48098	Spindle Shield	x
43	42184	Belt Cover Skirt	x
44	*	Slt. Truss Hd. Mch. Screw 1/4-20x1/2	x
45	*	Lockwasher, Spring 1/4	x
46	*	Hex Nut, 1/4-20	x
47	48127	Pulley (Incl. 48-49)	x
48	48141	Taper Hub	x
49	*	Hex Head Bolt, 1/4-20 x 3/4	x
50	*	Hex Nut, 5/8-11	x
51	48086	Belt, Blade Drive	x
52	*	Hex Head Bolt, 3/8-16 x 5	x
53	*	Hex Nut, 3/8-16	x
54	*	Lockwasher, Spring, 3/8	x
55	45098	Belt Guide Wld.	x
56	*	Hex Head Bolt, 7/16-14 x 1 1/4	x
57	*	Washer, 15/32 x 59/64 x 16 Ga.	x
58	*	Lockwasher, Spring, 7/16	x
59	*	Hex Nut, 7/16-14 Elastic Stop	x
60	45037	Idler Pivot Wld.	x
61	45012	Idler Pulley Support	x
62	48068	Pulley, Belt Guide	x
63	*	Hex Hd Bolt, 3/8-16 x 1-3/4	x
64	42057	Cam Link	x
65	46145	Idler Arm Assy. (Incl. 22 & 66)	x
66	48100-05	Bronze Bearing	x
67	04050-02	Retaining Ring, 3/4 Ext.-"E"	x
68	04004-04	Stud	x
69	48269	Idler Pulley, Belt Clutch	x
70	43063	Spacer, Idler	x
71	04070-02	Eyebolt, LH	x
72	04070-01	Eyebolt, RH	x
73	43025	Turnbuckle	x
74	04022-02	Wing Nut, 5/16-18	x
75	43042	Sleeve, Cam Clutch	x
76	*	Hex Head Bolt, 3/8-16 x 2-3/4	x
77	04041-08	Washer, 49/64x1 1/4x16 ga	x
78	43043	Sleeve, Clutch Rod	x
79	*	Cotter Pin, 3/32 x 1	x
80	04062-01	Hair Pin, Large	x
81	*	Hex Head Bolt, 3/8-16 x 1	x

*Common hardware which should be purchased locally.
All bolts Grade 5 plated, all other fasteners zinc plate.

SLM 48" CUTTER DECK



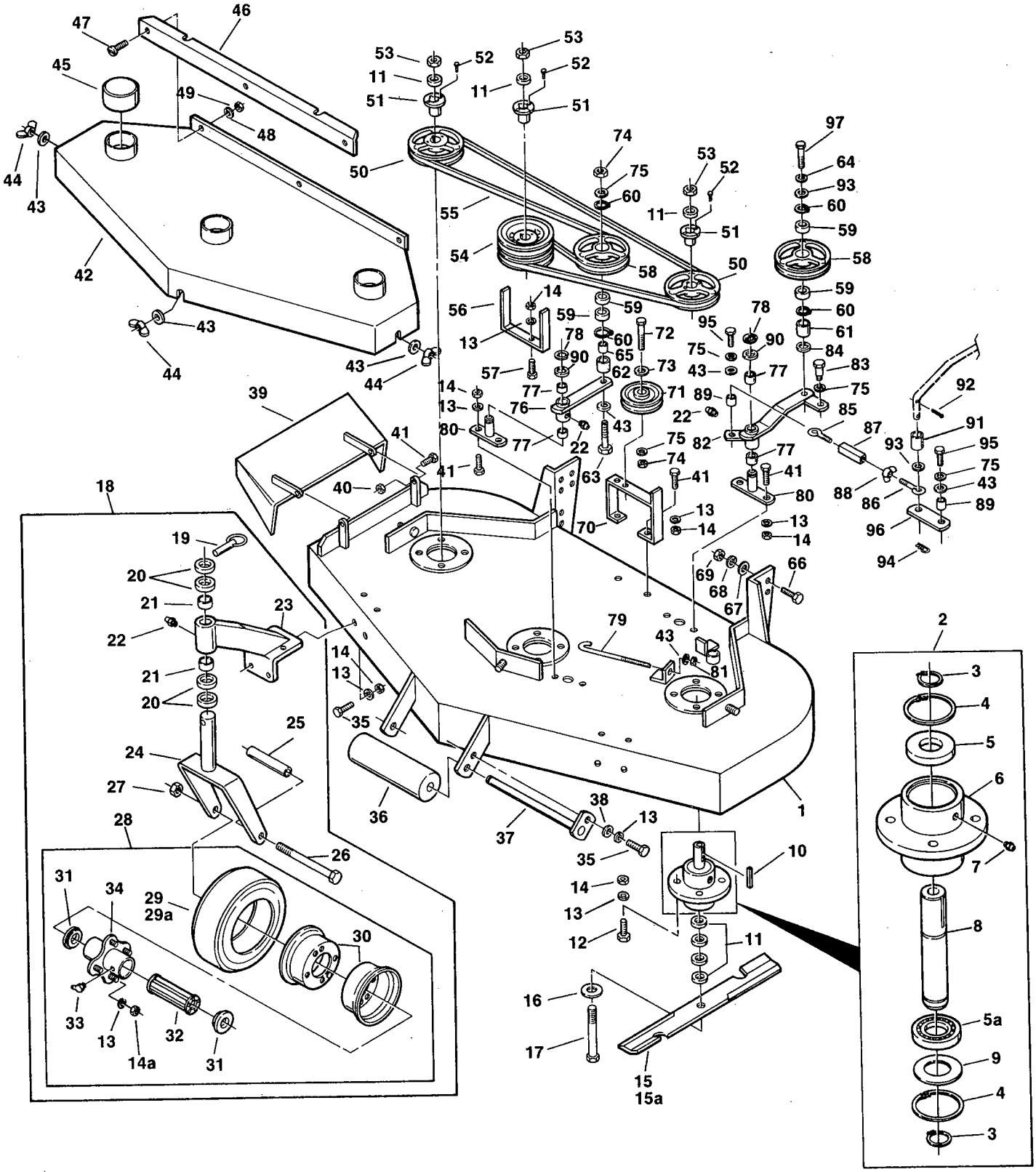
SLM 48" CUTTER DECK

See Page 10 for Illustration

REF. NO.	PART NUMBER	DESCRIPTION	SLM48
1	46152	Cutter Deck Wld (incl. Decals)	x
2	46020	Cutter Spindle Assy. (Incl. 3-9)	x
3	04050-04	Retaining Ring, 1" Ext.-Inverted	x
4	04050-07	Retaining Ring, 2-7/16 Int.-Basic	x
5	48101-01	Bearing, Cutter Spindle lower	x
5A	48101-02	Bearing, Cutter Spindle upper	x
6	41001	Spindle Housing	x
7	48114-02	Grease Fitting, Str. 5/16 Serr.	x
8	43001-02	Spindle, Cutter Blade	x
9	04041-02	Washer, 1-15/16 x 2-13/32 x 16 Ga.	x
10	04063-08	Key, 1/4 x 1/4 x 2	x
11	43038	Spacer, Cutter Blade	x
12	*	Hex Head Bolt, 5/16-18 x 1-1/4	x
13	*	Lockwasher, Spring, 5/16	x
14	*	Hex Nut, 5/16-18	x
14A	*	Hex Nut, 5/16-24	x
15	48110	Cutter Blade, 16-1/2" Std.	x
15A	48184	Cutter Blade, 16-1/2" High Lift	x
16	04040-10	Flat Washer, 5/8W	x
17	04001-41	Hex Head Bolt, 5/8-11 x 9-1/2	x
18	46079	Caster Assy, Comp. (Incl. 19-28)	x
19	04066-01	Quick Pin	x
20	43037-01	Spacer, Caster Yoke, 1/2 Long	x
21	48100-01	Bronze Bearing	x
22	48114-01	Grease Fitting, Str. 1/4-28	x
23	46082	Support Assy. (Incl. 21-22)	x
24	45006	Caster Yoke Wld.	x
25	43022	Sleeve, Caster Wheel Bearing	x
26	04001-37	Hex Head Bolt, 1/2-13 x 5-1/2	x
27	*	Hex Locknut, 1/2-13	x
28	48307-01	Wheel Assy. (Incl. 13-14,29-34)	x
29	48307-02	Tire Only, Caster Wheel	x
29A	48006-03	Inner Tube Only, Caster Wheel	x
30	48006-04	Rim Pair, Caster Wheel	x
31	48006-07	Retainer, Bearing, Caster Wheel	x
32	48006-06	Roller Bearing, Caster Wheel	x
33	48114-03	Grease Fitting, 45° 1/4-28	x
34	48006-05	Hub Assy. w/Bolts, Caster Wheel	x
35	*	Hex Head Bolt, 5/16-18 x 3/4	x
36	45029	Discharge Chute Wld.	x
37	*	Hex Nut, 5/16-18 Elastic Stop	x
38	*	Hex Head Bolt, 5/16-18 x 1	x
39	46149	Belt Cover Assy. (Incl. Decals)	x
40	*	Washer, 25/64 x 15/16 x 12 Ga.	x
41	04022-04	Wing Nut, 3/8-16	x
42	48098	Spindle Shield	x
43	42184	Belt Cover Skirt	x
44	*	Slt. Truss Hd.Mach.Screw, 1/4-20x1/2	x
45	*	Lockwasher, Spring 1/4	x
46	*	Hex Nut, 1/4-20	x
47	48127	Pulley (Incl. 48-49)	x
48	48141	Taper Hub	x
49	*	Hex Head Bolt, 1/4-20 x 3/4	x
50	*	Hex Nut, 5/8-11	x
51	48129	Pulley, Double (Incl. 48-49)	x
52	48087	Belt, RH Blade Drive	x
53	48088	Belt, Blade Drive	x
54	*	Hex Head Bolt, 3/8-16 x 5	x
55	*	Hex Nut, 3/8-16	x
56	*	Lockwasher, Spring, 3/8	x
57	45037	Idler Piviot Wld.	x
58	45098	Belt Guide Wld.	x
59	*	Hex Head Bolt, 7/16-14 x 1 1/4	x
60	*	Washer, 15/32 x 59/64 x 16 Ga.	x
61	*	Lockwasher, Spring, 7/16	x
62	*	Hex Nut, 7/16-14, Elastic Stop	x
63	45012	Idler Pulley Support	x
64	48068	Pulley, Belt Guide	x
65	*	Hex Hd. Bolt, 3/8-16 x 1-3/4	x
66	42057	Cam Link	x
67	48181	Idler Pulley, "V" Groove	x
68	04050-02	Retaining Ring, 3/4 Ext.-"E"69	x
69	46081	Idler Arm Assy. (Incl. 22 & 70)	x
70	48100-05	Bronze Bearing	x
71	43028	Rod, Idler Pull, J	x
72	43077	Spacer, J Pull Rod	x
73	04041-12	Washer, 3/8 x 1-1/2 x 16 Ga.	x
74	04004-04	Stud	x
75	*	Hex Nut, 3/8-16 Elastic Stop	x
76	46145	Idler Arm Assy. (Incl. 22 & 70)	x
77	43063	Spacer, Idler	x
78	04070-02	Eyebolt, LH	x
79	04070-01	Eyebolt, RH	x
80	43025	Turnbuckle	x
81	04022-02	Wing Nut, 5/16-18	x
82	43042	Sleeve, Cam Clutch	x
83	*	Hex Head Bolt, 3/8-16 x 2-3/4	x
84	48269	Idler Pulley, Belt Clutch	x
85	04041-08	Washer 49/64x1 1/4x16 ga	x
86	43043	Sleeve, Clutch Rod	x
87	*	Cotter Pin, 3/32 x 1	x
88	04062-01	Hair Pin, Large	x
89	*	Hex Head Bolt, 3/8-16 x 1	x

* Common hardware which should be purchased locally.
All bolts Grade 5 plated, all other fasteners zinc plate.

SM48" & SM61" CUTTER DECK



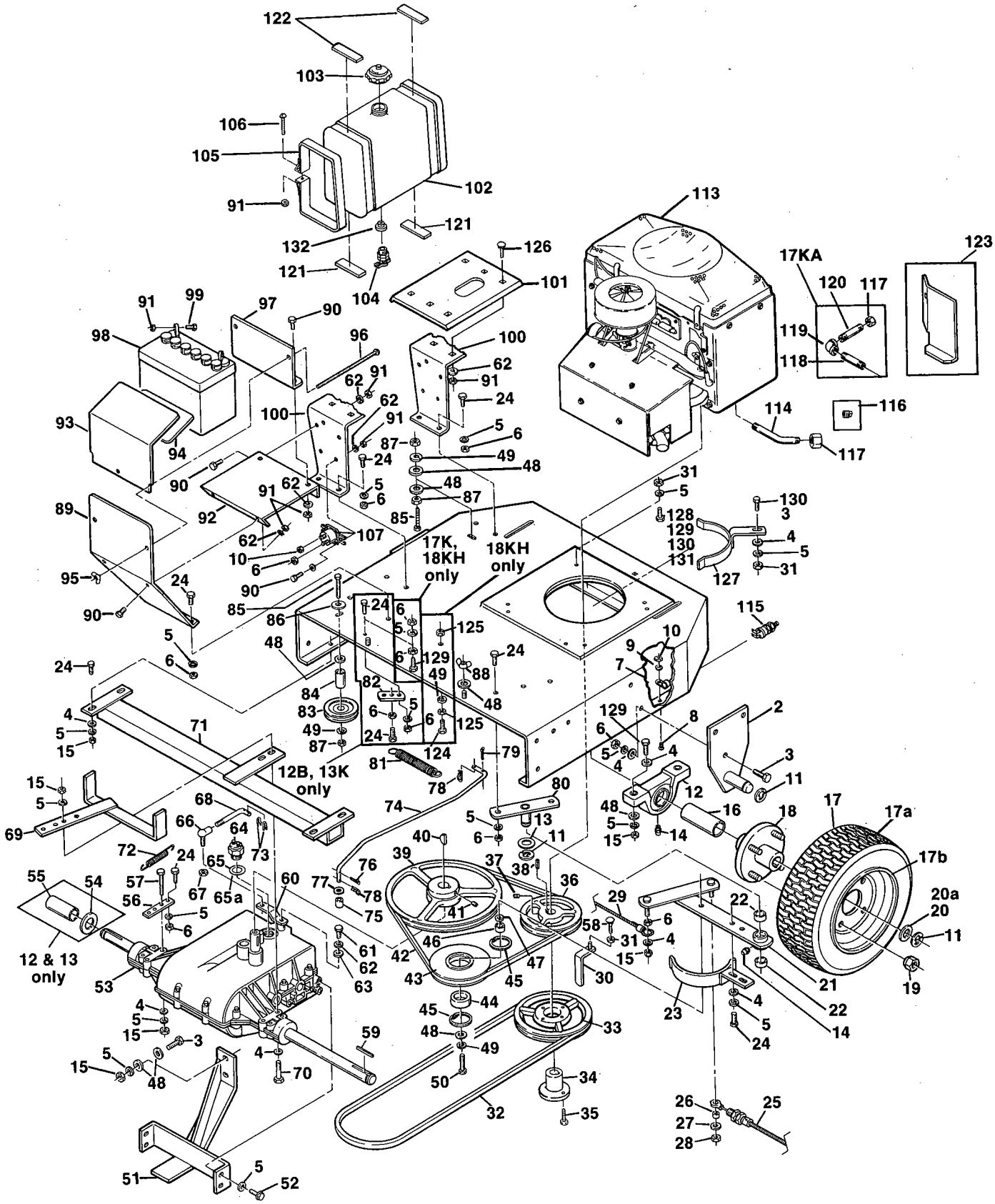
SM48 & SM61 CUTTER DECK

See Page 12 for Illustration

REF. NO.	PART NUMBER	DESCRIPTION	SM 48	SM 61
1	46148	Cutter Deck Wld (incl. Decal)	x	
1	46150	Cutter Deck Wld (incl. Decal)		x
2	46020	Cutter Spindle Assy. (incl. 3-9)	x	x
3	04050-04	Retaining Ring, 1" Ext.-Inverted	x	x
4	04050-07	Retaining Ring, 2-7/16 Int.-Basic	x	x
5	48101-01	Bearing, Cutter Spindle Upper	x	x
5A	48101-02	Bearing, Cutter Spindle Lower	x	x
6	41001	Spindle Housing	x	x
7	48114-02	Grease Fitting, Str.5/16 Serr.	x	x
8	43001-02	Spindle, Cutter Blade	x	x
9	04041-02	Washer, 1-15/16x2-13/32x16 Ga	x	x
10	04063-08	Key, 1/4 x 1/4 x 2	x	x
11	43038	Spacer, Cutter Blade	x	x
12	*	Hex Head Bolt, 5/16-18 x 1-1/4	x	x
13	*	Lockwasher, Spring, 5/16	x	x
14	*	Hex Nut, 5/16-18	x	x
14A	*	Hex Nut, 5/16-24	x	x
15	48111	Cutter Blade, 21" Std		x
15	48110	Cutter Blade, 16-1/2" Std.	x	
15A	48184	Cutter Blade, 16-1/2" High Lift	x	
16	04040-10	Flat Washer, 5/8W	x	x
17	04001-41	Hex Head Bolt, 5/8-11 x 9-1/2	x	x
18	46079	Caster Assy, Comp. (Incl. 19-28)	x	x
19	04066-01	Quick Pin	x	x
20	43037-01	Spacer, Caster Yoke, 1/2 Long	x	x
21	48100-01	Bronze Bearing	x	x
22	48114-01	Grease Fitting, Str, 1/4-28	x	x
23	46082	Support Assy. (Inc. 21-22)	x	x
24	45006	Caster Yoke Wld.	x	x
25	43022	Sleeve, Caster Wheel Bearing	x	x
26	04001-37	Hex Head Bolt, 1/2-13 x 5-1/2	x	x
27	*	Hex Locknut, 1/2-13		
28	48307-01	Wheel Assy. (Incl. 13-14,29-34)	x	x
29	48307-02	Tire Only, Caster Wheel	x	x
29A	48006-03	Inner Tube Only, Caster Wheel	x	x
30	48006-04	Rim Pair, Caster Wheel	x	x
31	48006-07	Retainer, Bearing, Caster Wheel	x	x
32	48006-06	Roller Bearing, Caster Wheel	x	x
33	48114-03	Grease Fitting, 45 °1/4-28	x	x
34	48006-05	Hub Assy. w/Bolts, Caster Wheel	x	x
35	*	Hex Head Bolt, 5/16-18 x 3/4	x	x
36	48038	Guide Roller		x
37	45046	Roller Shaft Wld		x
38	*	Washer, 11/32 x 11/16 x 16 Ga.		x
39	45029	Discharge Chute Wld.	x	x
40	*	Hex Nut, 5/16-18 Elastic Stop	x	x
41	*	Hex Head Bolt, 5/16-18 x 1	x	x
42	46149	Belt Cover Assy. (Incl. Decals)	x	
42	46151	Belt Cover Assy. (Inc. Decals)		x
43	*	Washer, 25/64 x 15/16 x 12 Ga.	x	x
44	04022-04	Wing Nut, 3/8-16	x	x
45	48098	Spindle Shield	x	x
46	42045	Belt Cover Skirt	x	x
47	*	Mach Screw, 1/4-20 x 1/2 Truss Hd.	x	x
48	*	Lockwasher, Spring, 1/4	x	x
49	*	Hex Nut, 1/4-20	x	x
50	48127	Pulley (Incl. 51-52)	x	x
51	48141	Taper Hub	x	x
52	*	Hex Head Bolt, 1/4-20 x 3/4	x	x
53	*	Hex Nut, 5/8-11	x	x
54	48129	Pulley, Double (Incl. 51-52)	x	
54	48128	Pulley, Double (Incl. 51-52)		x
55	48082	Belt, Blade Drive	x	
55	48084	Belt, Blade Drive		x
56	42004	Belt Guide	x	
56	42063	Belt Guide		x
57	*	Hex Hd. Bolt, 5/16-18 x 1-1/2	x	x
58	48062	Pulley Idler	x	x
59	48102	Bearing	x	x
60	04050-06	Retaining Ring, 1-9/16 Int. Basic	x	x
61	43045	Sleeve, Idler Bearing	x	x
62	43040	Spacer, Idler Bearing	x	x
63	*	Hex Hd Bolt, 3/8-16 x 2 3/4	x	x
64	*	Lockwasher, Spring 1/2	x	x
65	43105	Sleeve, Idler Pulley	x	x
66	*	Hex Head Bolt, 7/16-14 x 1 1/4	x	x
67	*	Washer, 15/32 x 59/64 x 16 GA	x	x
68	*	Lockwasher, Spring, 7/16	x	x
69	*	Hex Nut, 7/16-14, Elastic Stop	x	x
70	45012	Idler Pulley Support	x	x
71	48068	Pulley, Belt Guide	x	x
72	*	Hex Hd. Bolt, 3/8-16 x 1-3/4	x	x
73	*	Washer, 13/32 x 13/16 x 16 Ga.	x	x
74	*	Hex Nut, 3/8-16	x	x
75	*	Lockwasher, Spring, 3/8	x	x
76	46081	Idler Arm Assy. (Incl. 22 & 77)	x	x
77	48100-05	Bronze Bearing	x	x
78	04050-02	Retaining Ring, 3/4 Ext.-"E"	x	x
79	43028	Rod, Idler Pull, J	x	x
80	45037	Idler Pivot Wld.	x	x
81	*	Hex Nut, 3/8-16 Elastic Stop	x	x
82	46155	Idler Arm Assy. (Incl. 22 & 77)	x	x
83	43054	Shoulder Bolt	x	x
84	43041	Spacer, Idler	x	x
85	04070-02	Eyebolt, LH	x	x
86	04070-01	Eyebolt, RH	x	x
87	43025	Turnbuckle	x	x
88	04022-02	Wing Nut, 5/16-18	x	x
89	43042	Sleeve, Cam Clutch	x	x
90	04041-08	Washer 49/64x1 1/4x16 Ga	x	x
91	43043	Sleeve, Clutch Rod	x	x
92	*	Cotter Pin, 3/32 x 1	x	x
93	*	Washer, 33/64 x 1 x 16 Ga.	x	x
94	04062-01	Hair Pin, Large	x	x
95	*	Hex Head Bolt, 3/8-16 x 1	x	x
96	42057	Cam Link	x	x
97	04001-34	Hex Hd. Bolt, 1/2-20 x 2	x	x

* Common hardware which should be purchased locally.
All bolts Grade 5 plated, all other fasteners zinc plate.

ENGINE DECK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ENGINE DECK

See Page 14 For Illustration

REF. NO.	PART NUMBER	DESCRIPTION	16 " Wheels ST 12B	16 " Wheels ST 13K	18" Wheels ST 17KA	18" Wheels ST 18KH
1	45146	Engine Deck Wld			x	x
1	45061	Engine Deck Wld	x	x		
2	45149	Hitch Bracket Wld.	x	x	x	x
3	*	Hex Head Bolt, 5/16-18x1	x	x	x	x
4	*	Washer, 11/32x11/16x16 Ga.	x	x	x	x
5	*	Lockwasher, Spring, 5/16	x	x	x	x
6	*	Hex Nut, 5/16-18	x	x	x	x
7	48030-01	Clamp	x	x	x	x
8	*	Phillips Washer Hd.Screw #10-32 x 1/2	x	x	x	x
9	*	Lockwasher, #10 Ext Tooth	x	x	x	x
10	*	Hex Nut, #10-32	x	x	x	x
11	04050-02	Retaining Ring, 3/4 Ext."E"	x	x		
11	04050-08	Retaining Ring, 1 Ext."E"			x	x
12	48104-01	Bearing, Pillow Block	x	x		
12	48104-02	Bearing, Pillow Block 1"			x	x
13	04041-08	Washer 49/64 x 1 1/4 x 16 Ga.	x	x	x	x
14	48114-01	Grease Fitting, Str.,1/4-28	x	x	x	x
15	*	Hex Lock Nut, 5/16-18	x	x	x	x
16	43107	Spacer - LH Axle			x	x
16	43019-05	Spacer - LH Axle	x	x		
17	48004-01	Drive Wheel Assembly (Incl. AA)	x	x		
17A	48004-02	Tire, 16 x 6.50-8 2-Ply	x	x		
17B	48004-04	Rim	x	x		
18	48004-05	Hub & Flange (incl Bolts) AA	x	x		
19	48004-06	Wheel Bolt & Washer	x	x		
17	48321	Drive Wheel (Incl. BB)			x	x
17A	48321-02	Tire,18x8.50-8 4 ply			x	x
17B	48321-04	Rim			x	x
18	48321-05	Hub & Flange (Incl. Bolts) BB			x	x
19	48321-06	Bolt and Nut			x	x
20	04041-08	Washer,49/64x1-1/4x16 Ga.	x	x		
20	04042-05	Washer, 1 1/16x1 3/4x12 Ga			x	x
20A	04042-03	Washer,13/16x1-3/8x3/32	x	x		
20A	04041-14	Washer, 1 1/16x1 3/4x18 Ga			x	x
21	46144	Idler Arm (Incl. 14&22)	x	x	x	x
22	48100-05	Bronze Bearing	x	x	x	x
23	45014	Belt Guide	x	x	x	x
24	*	Hex Hd. Bolt, 5/16-18x3/4	x	x	x	x
25	48241	Foot Cable Assembly			x	x
25	48047	Foot Cable Assembly	x	x		
26	43049	Sleeve, Foot Cable	x	x	x	x
27	*	Washer,9/32 x 5/8 x 16 Ga.	x	x	x	x
28	*	Hex Lock Nut, 1/4-20	x	x	x	x
29	48046	Brake Cable	x	x	x	x
30	45063	Belt Guide Wld.	x	x		
30	42199	Belt Guide			x	x
31	*	Hex Nut,5/16-18, Elastic Stop	x	x	x	x
32	48081	Belt, Blade Drive SM48			x	x
32	48083	Belt, Blade Drive SM61			x	x
32	48086	Belt, Blade Drive SLM40	x	x		
32	48088	Belt, Blade Drive Slm48	x	x		
33	48168	Pulley, Mower Drive (Incl. 34 & 35)	x	x	x	x
34	48141	Taper Hub	x	x	x	x
35	*	Hex Hd, Bolt, 1/4-20x1-3/8	x	x	x	x
36	48063	Pulley	x	x	x	x
37	*	Set Screw,Hex Socket,Cup Pt.5/16-18x1 1/4	x	x	x	x
38	04063-03	Key, 1/4 x 1/4 x 2-1/2	x	x	x	x

cont'd

See Page 14 For Illustration

ENGINE DECK

REF. NO.	PART NUMBER	DESCRIPTION	16" Wheels ST 12B	16" Wheels ST 13K	18" Wheels ST 17KA	18" Wheels ST 18KH
39	48064	Pulley, Transaxle	x	x		
39	48322	Pulley, Transaxle			x	x
40	04063-09	Key, Hypro #9	x	x	x	x
41	*	Setscrew Hex Socket Cup Pt.5/16-18 x 3/8	x	x	x	x
42	48085	Belt, Transaxle Drive	x	x	x	x
43	48065	Pulley, Idler	x	x	x	x
44	48102	Bearing,Idler Pulley	x	x	x	x
45	04050-06	Retaining Ring, 1-9/16 Int. Basic	x	x	x	x
46	43044	Sleeve, Transmission Idler Bearing	x	x	x	x
47	43039	Spacer, Transmission Idler	x	x	x	x
48	*	Washer,25/64x15/16x12 Ga.	x	x	x	x
49	*	Lockwasher, Spring, 3/8	x	x	x	x
50	*	Hex Hd. Bolt,3/8-16x1-1/2	x	x	x	x
51	45148	Transaxle Protector.			x	x
51	45121	Transaxle Protector	x	x		
52	*	Hex Head Bolt, Taptite, 5/16-18 x 3/4	x	x	x	x
53	48310	Transaxle, See Parts Break Down Page 26 & 27			x	x
53	48160	Transaxle, See Parts Break Down Page 24 & 25	x	x		
54	04042-02	Thrust Washer	x	x		
55	43019-06	Spacer - RH Axle	x	x		
56	42075	Spacer, Transaxle	x	x		
56	42367	Spacer, Transaxle			x	x
57	*	Hex Hd. Bolt,5/16-18x2-3/4	x	x		
57	*	Hex Hd Bolt, 5/16-16 x 3			x	x
58	*	Carriage Hd. Bolt 5/16-18 x 3/4	x	x	x	x
59	04063-04	Key, 3/16 x 3/16 x 2-1/2	x	x		
59	04063-11	Key, 1/4 x 1/4 x 2 1/2 Plated			x	x
60	42061	Shift Lever	x	x		
60	42368	Shift Lever			x	x
61	04001-55	Hex Hd. Bolt,1/4-28x3/4 Grd.8	x	x	x	x
62	*	Lockwasher, Spring, 1/4	x	x	x	x
63	04043-01	Washer,17/64x7/8x1/8 H.T.	x	x	x	x
64	48021	Neutral Safety Switch	x	x	x	x
65	48122-01	Fiber Washer, .010	x	x	x	x
65A	48122-02	Fiber Washer, .020	x	x	x	x
66	48118	Ball Joint	x	x	x	x
67	04021-06	Hex Lock Nut, 3/8-24	x	x	x	x
68	43029	Shift Connector Rod	x	x		
68	44016	Shift Connector Rod			x	x
69	45119	Belt Guide			x	x
69	45067	Belt Guide	x	x		
70	*	Hex Head Bolt, 5/16-18x3	x	x	x	x
71	45147	Transaxle Support.			x	x
71	45064	Transaxle Support.	x	x		
72	48052	Spring, Brake Return	x	x	x	x
73	04062-02	Hair Pin, Small	x	x	x	x
74	44017	+ Blade Clutch Rod (Gold Color is used w/2 hole cam links)			x	x
74	44015	+ Blade Clutch Rod (Gold Color is used w/2 hole cam links)	x	x		
75	43043	Sleeve	x	x	x	x
76	*	Cotter Pin, 3/32 x 1	x	x	x	x
77	*	Washer, 33/64 x 1 x 16 Ga.			x	x
78	04062-01	Hair Pin, Large	x	x	x	x
79	*	Cotter Pin, 3/32 x 3/4	x	x	x	x
80	45037	Pivot Base Wld.	x	x	x	x
81	48051	Spring, Belt Clutch	x	x	x	x
82	42060	Bracket, Spring Mounting	x	x		
83	48066	Pulley, Brake Cable	x	x	x	x
84	43024	Spacer, Pulley	x	x	x	x

cont'd

+ Silver colored control rods are used w/3 hole Cam Links

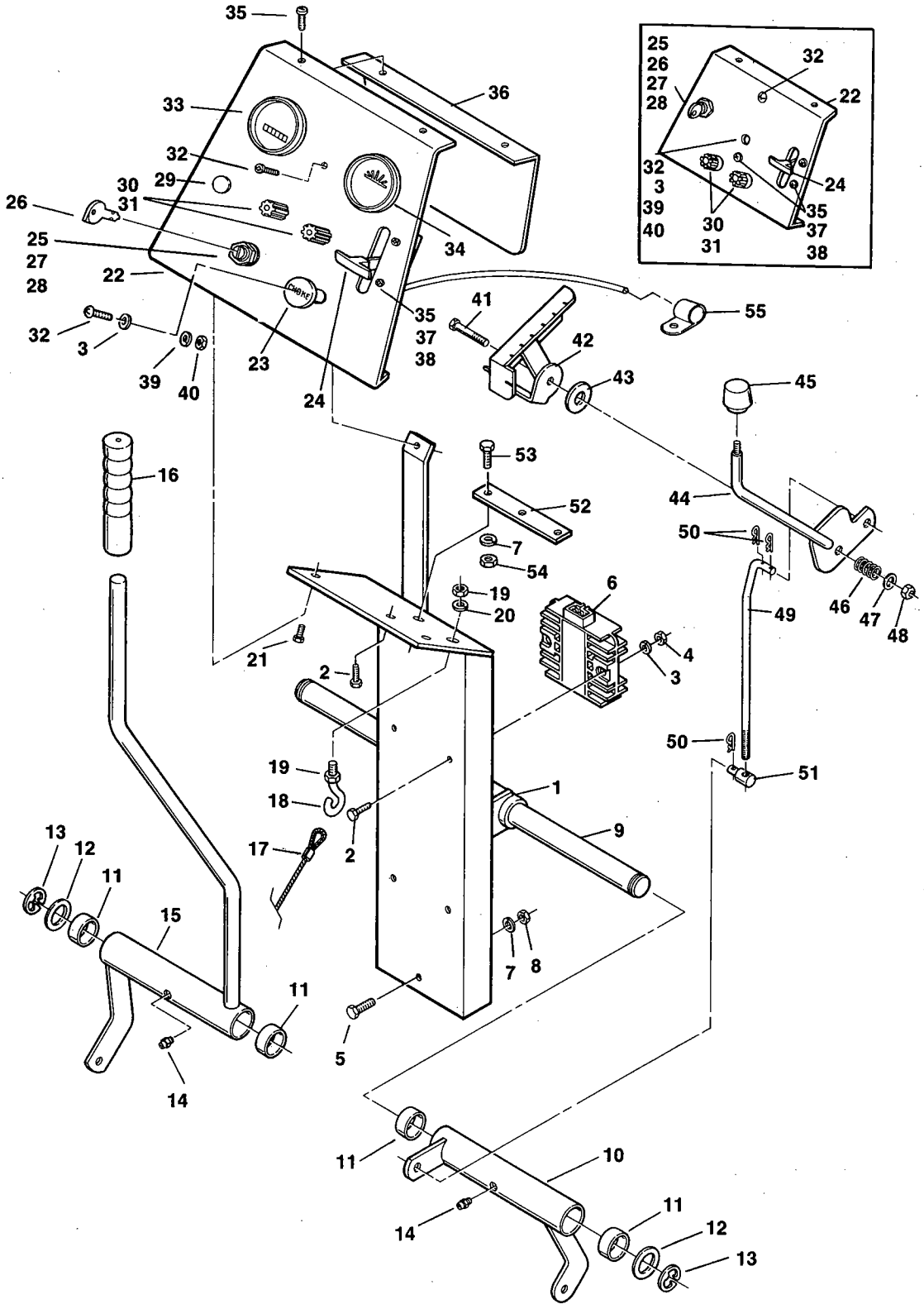
See Page 14 For Illustration

ENGINE DECK

REF. NO.	PART NUMBER	DESCRIPTION	16" Wheels ST 12B	16" Wheels ST 13K	18" Wheels ST 17KA	18" Wheels ST 18KH
85	*	Hex Head Bolt, 3/8-16 x 3	x	x	x	x
86	*	Washer, 13/32 x 1-1/2 x 7 Ga.	x	x	x	x
87	*	Hex Nut, 3/8-16	x	x	x	x
88	04022-04	Wing Nut,3/8-16,Elastic Stop	x	x	x	x
89	42187	Battery Mounting Bracket	x	x	x	x
90	*	Hex Head Bolt, 1/4-20x3/4	x	x	x	x
91	*	Hex Nut, 1/4-20	x	x	x	x
92	42188	Battery Shelf	x	x	x	x
93	42024	Battery Cover	x	x	x	x
94	48099	Battery Cover Pad	x	x	x	x
95	04022-01	Wing Nut, 1/4-20,Elastic Stop	x	x	x	x
96	04003-01	Carriage Bolt, 1/4-20 x 6	x	x	x	x
97	42055	Battery Clamp	x	x	x	x
98	48015	Battery	x	x	x	x
99	*	Hex Head Bolt,1/4-20 x 1/2	x	x	x	x
100	42370	Tank Mtg. Bracket (Vert.)	x	x	x	x
101	42377	Support, Fuel Tank (Hor.)	x	x	x	x
102	46174	Fuel Tank (Incl. 103, 104, & 132)	x	x	x	x
103	48311	Fuel Tank Cap	x	x	x	x
104	48308	Fuel Shut-off Valve	x	x	x	x
105	42369	Fuel Tank Strap	x	x	x	x
106	*	Screw, Slotted Rd.Head Mach.1/4-20 x 2	x	x	x	x
107	48016	Solenoid	x			x
108	48179-01	Fuel Hose, Short		x	x	
109	48059-02	Fuel Hose Clamp		x	x	
110	48057-01	Fuel Filter	x	x	x	
111	48059-01	Fuel Hose Clamp	x	x	x	x
112	48058-03	Fuel Hose			x	
112	48058-05	Fuel Hose	x	x		
112	48058-07	Fuel Hose				x
113	48152	Engine, 12-1/2 HP Kawasaki		x		
113	48245	Engine, 17 HP Kawasaki			x	
113	48258	Engine, 18 HP Kohler				x
113	48270	Engine, 12 HP B&S	x			
114	48115	Oil Drain Extension				x
115	48019	Safety Switch, Blade Clutch	x	x	x	x
116	*	Oil Drain Plug	x			
117	*	Pipe Cap, 3/8 NPT			x	x
118	48255	Pipe Nipple w/Special Thrds.			x	
119	*	Pipe Elbow, 3/8 NPT			x	
120	*	4" Pipe Nipple, 3/8 NPT			x	
121	48205	Pad, Tank Support	x	x	x	x
122	48292	Pad, Strap Cushion	x	x	x	x
123	42328	Heat Baffle				x
124	*	Bolt Hex Hd 3/8-16 x 5				x
125	*	Hex Jam Nuts 3/8-16				x
126	*	Carriage Hd. Bolt 1/4-20 x 3/4	x	x	x	x
127	45013	Belt Guide Wld.				x
127	45062	Belt Guide Wld.	x	x	x	
128	*	Hex Hd Bolt,Metric 8-1.25x30			x	
128	*	Hex Hd Bolt, Metric 8-1.25x25		x		
129	*	Hex Hd Bolt, 5/16-18 x 1-1/2	x		x	x
130	*	Hex Hd Bolt, 5/16-18 x 1-3/4				x
131	*	Hex Head Bolt, 5/16-18 x 2				x
132	48309	Bushing, Fuel Tank/Valve	x	x	x	x

* Common hardware which should be purchased locally.
All bolts Grade 5 plated, all other fasteners zinc plate.

INSTRUMENT PANEL



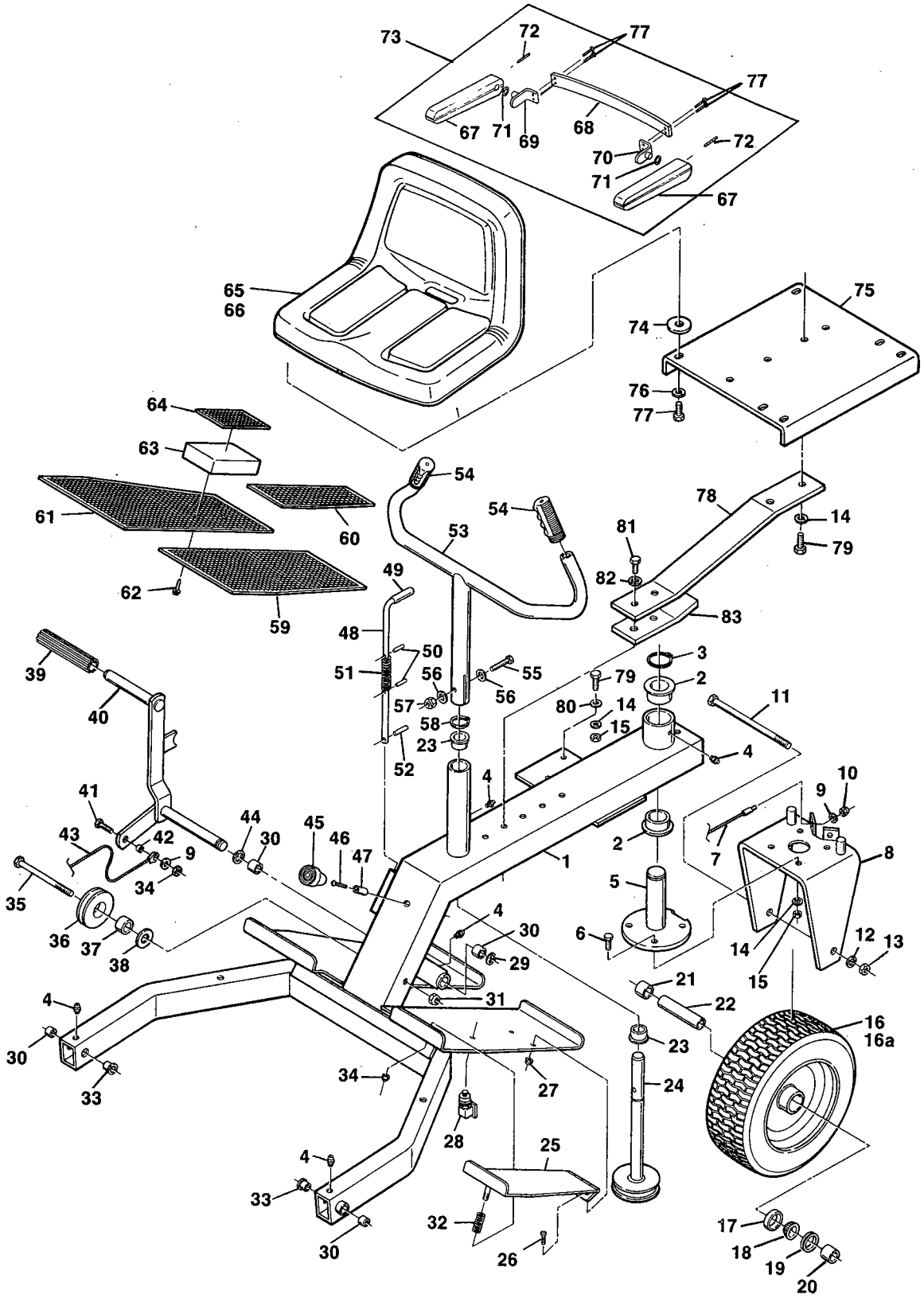
INSTRUMENT PANEL

REF. NO.	PART NUMBER	DESCRIPTION *See Page 18 for Illustration*	ST 12B	ST 13K	ST 17KA	ST 18KH
1	45025	Console Support Wld	x	x	x	x
2	*	Hex Hd Bolt, 1/4-20 x 1-1/4			x	
3	*	Washer,9/32 x 5/8 x 16 Ga.	x	x	x	
4	*	Hex Lock Nut, 1/4-20			x	
5	*	Hex Hd Bolt, 5/16-18 x 2	x	x	x	
6	+	Regulator/Rectifier [Kawasaki 21066-2056]			x	
7.	*	Lockwasher, 5/16 Spring	x	x	x	x
8	*	Hex Lock Nut, 5/16-18	x	x	x	x
9	43017	Bell Crank Shaft	x	x	x	x
10	46142	Shifter Wld. (Incl. 11 & 14)	x	x	x	x
11	48100-06	Bronze Bearing	x	x	x	x
12	04041-08	Washer, 49/64 x 1-1/4 x 16 Ga.	x	x	x	x
13	04050-02	Retaining Ring, 3/4 Ext. "E"	x	x	x	x
14	48114-01	Grease Fitting, 1/4-28 Str.	x	x	x	x
15	46143	Mower Engage Wld. (Incl.11, 14, 16)	x	x	x	x
16	48093	Grip, Mower Lever	x	x	x	x
17	48045	Winch Cable Assembly	x	x	x	x
18	04070-03	Eyebolt, 3/8-16 x 2	x	x	x	x
19	*	Hex Nut, 3/8-16	x	x	x	x
20	*	Lockwasher, 3/8 Spring	x	x	x	x
21	*	Hex Hd Bolt, 1/4-20 x 3/4	x	x	x	x
22	42049	Instrument Panel			x	x
22	42190	Instrument Panel	x	x		
23	48091	Choke Control				x
24	48090	Throttle Control				x
24	48246	Throttle Control	x	x	x	
25	48017	Starter Switch (Incl.26-28)	x	x	x	x
26	48017-02	Key, Ignition	x	x	x	x
27	48017-03	Lockwasher, Int. Tooth 5/8	x	x	x	x
28	48017-04	Hex Nut, 5/8-11	x	x	x	x
29	48035	Snap In Plug			x	x
30	48024	Fuse Holder	x	x	x	x
31	48025-01	Fuse, 20A	x	x	x	x
32	*	Truss Head Screw, 1/4-20x3/4	x	x	x	x
33	48023	Hour Meter			x	x
34	48022	Ammeter			x	x
35	*	Screw, Phillips Washer Hd, #10-32 x 1/2	x	x	x	x
36	45120	Panel Cover Wld.			x	
36	45122	Panel Cover Wld.				x
36	42191	Panel Cover Wld.	x	x		
37	*	Lockwasher, Ext. Tooth #10	x	x	x	x
38	*	Hex Nut, #10-32	x	x	x	x
39	*	Lockwasher, 1/4 Spring	x	x	x	
40	*	Hex Nut, 1/4-20	x	x	x	
41	*	Hex Hd Bolt, 3/8-16 x 2	x	x	x	x
42	45024	Shift Quadrant Wld.	x	x	x	x
43	04041-10	Washer, 3/8 x 2 x 16 Ga.	x	x	x	x
44	45023	Shifter Handle Wld.	x	x	x	x
45	48092	Shifter Knob	x	x	x	x
46	48050	Spring	x	x	x	x
47	*	Washer, 13/32 x 13/16 x 16 Ga.	x	x	x	x
48	*	Hex Nut, 3/8-16 Elastic Stop	x	x	x	x
49	43030	Shifter Connector Rod	x	x	x	x
50	04062-01	Hair Pin Cotter, Large	x	x	x	x
51	43032	Swivel Joint	x	x	x	x
52	42205	Winch Cable Attachment	x	x	x	x
53	*	Hex Head Bolt, 5/16-18 x 1	x	x		
54	*	Hex Nut, 5/16-18	x	x		
55	48030-01	Clamp, Cable	x	x	x	x

* Common hardware which should be purchased locally.
All bolts Grade 5 plated, all other fasteners zinc plate.

\+ Available from Kawasaki Motors Corp., U.S.A.

RIDER FRAME ASSEMBLY



RIDER FRAME ASSEMBLY

See Page 20 for Illustration

REF. NO.	PART NUMBER	DESCRIPTION	ST 12B	ST 13K	ST 17KA	ST 18KH
1	46057	Steering Frame Wld.			x	x
1	45065	Steering Frame Wld.	x	x		
2	48100-02	Bronze Bearing	x	x	x	x
3	04050-02	Retaining Ring, 1-1/8 Ext. Basic	x	x	x	x
4	48114-01	Grease Fitting, 1/4-28 Str.	x	x	x	x
5	45008	Rear Wheel Pivot Wld.	x	x	x	x
6	*	Hex Head Bolt, 3/8-16 x 1-3/8	x	x	x	x
7	48042	Steering Cable			x	x
7	48153	Steering Cable	x	x		
8	45035	Rear Wheel Yoke Wld.	x	x	x	x
9	*	Washer, 9/32 x 5/8 x 16 Ga.	x	x	x	x
10	04021-03	Hex Lock Nut, 1/4-28	x	x	x	x
11	04001-40	Hex Head Bolt, 5/8-11 x 9	x	x	x	x
12	*	Lockwasher, Spring, 5/8	x	x	x	x
13	*	Hex Nut, 5/8-11	x	x	x	x
14	*	Lockwasher, Spring, 3/8	x	x	x	x
15	*	Hex Nut, 3/8-16	x	x	x	x
16	48005-01	Caster Wheel Assembly (Incl. 16A-19)	x	x	x	x
16A	48005-03	Rim Only	x	x	x	x
17	48005-04	Bearing Cup	x	x	x	x
18	48005-05	Bearing Cone	x	x	x	x
19	48005-06	Grease Seal	x	x	x	x
20	43020-01	Spacer, Short	x	x	x	x
21	43020-02	Spacer, Long	x	x	x	x
22	43021	Rear Wheel Sleeve	x	x	x	x
23	48100-01	Bronze Bearing	x	x	x	x
24	45009	Steering Shaft Wld.	x	x	x	x
25	45033	Safety Pedal Wld	x	x	x	x
26	*	Flat Head Screw, #10-32 x 3/4	x	x	x	x
27	*	Hex Nut, #10-32,Elastic Stop	x	x	x	x
28	48026	Foot Safety Switch (Incl. Boot and Fasteners)	x	x	x	x
29	04050-02	Retaining Ring, 3/4 Ext. "E"	x	x	x	x
30	48100-06	Bronze Bearing	x	x	x	x
31	*	Hex Nut, 1/2-13, Elastic Stop	x	x	x	x
32	48049	Spring, Foot Safety Switch	x	x	x	x
33	48100-03	Bronze Bearing	x	x	x	x
34	*	Hex Lock Nut, 1/4-20	x	x	x	x
35	04001-37	Hex Hd Bolt, 1/2-13x5-1/2	x	x	x	x
36	46139	Winch Cable Pulley (Incl. 37)	x	x		
36	46140	Winch Cable Pulley (Incl. 37)			x	x
37	48100-04	Bronze Bearing	x	x	x	x
38	*	Washer, 17/32 x 1-1/16 x 3/32	x	x	x	x
39	48096	Sleeve, Foot Pedal	x	x	x	x
40	45115	Foot Pedal Wld.			x	x
40	45019	Foot Pedal Wld.	x	x		x
41	*	Hex Head Bolt, 1/4-20 x 1	x	x	x	x
42	43049	Sleeve	x	x	x	x
43	48241	Foot Cable Assembly			x	
43	48047	Foot Cable Assembly	x	x		x
44	*	Washer, 49/64 x 1-1/4 x 16 Ga.	x	x	x	x
45	48097	Bumper Stop Cover	x	x	x	x

cont'd

* Common hardware purchased locally.

All bolts Grade 5 plated, all other fasteners zinc plate.

RIDER FRAME ASSEMBLY

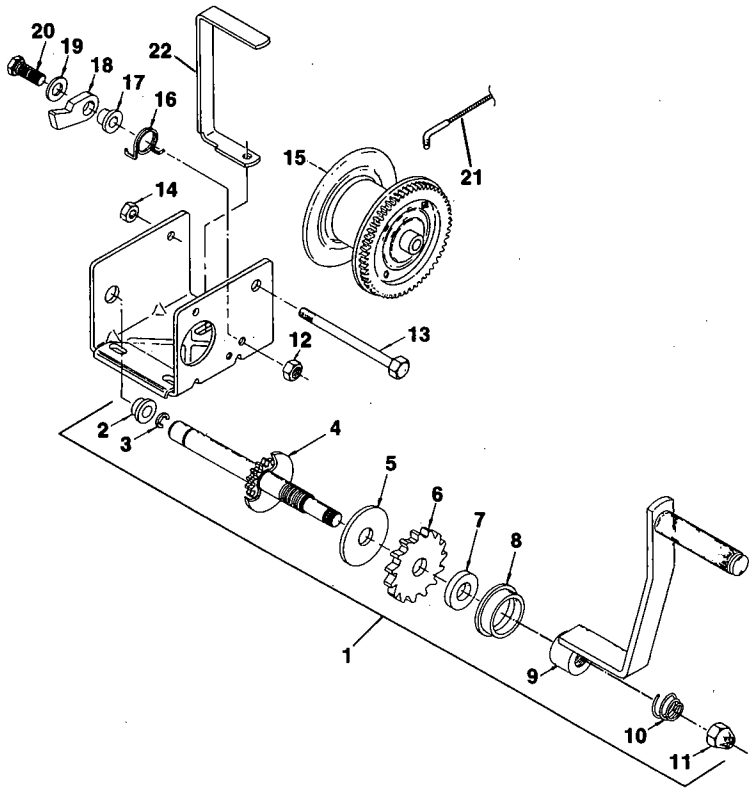
See Page 20 for Illustration

REF. NO.	PART NUMBER	DESCRIPTION	ST 12B	ST 13K	ST 17KA	ST 18KH
46	*	Screw, Phillips Flat Head, 1/4-20 x 1-1/2	x	x	x	x
47	43046	Bumper Stop	x	x	x	x
48	46141	Parking Brake Lever (Incl. 49)	x	x	x	x
49	48095	Grip	x	x	x	x
50	*	Rolling Pin, 5/32 x 3/4	x	x	x	x
51	48053	Spring	x	x	x	x
52	*	Drive Lock Pin, 3/16 x 1-1/4	x	x	x	x
53	46036	Steering Handle Wld. (Incl. 54)	x	x		
53	46029	Steering Handle Wld. (Incl. 54)			x	x
54	48159	Grip	x	x	x	x
55	*	Hex Head Bolt, 5/16-18 x 1-1/2	x	x	x	x
56	*	Washer, 11/32 x 11/16 x 16 Ga.	x	x	x	x
57	*	Hex Lock Nut, 5/16-18	x	x	x	x
58	04050-03	Retaining Ring, 7/8 Ext. Basic	x	x	x	x
59	48040	Pad - LH	x	x	x	x
60	48041	Pad, Safety Pedal	x	x	x	x
61	48039	Pad - RH	x	x	x	x
62	*	Hex Head Wood Screw #14 x 1			x	x
63	48036	Heel Rest			x	x
64	48037	Pad, Heel			x	x
65	48014	Seat Assembly (incl. items 66-72,77)			x	x
66	48014-01	Seat Only	x	x	x	x
67	48014-03	Arm Rest			x	x
68	48014-07	Back Strap			x	x
69	48014-04	Mounting Bracket-RH			x	x
70	48014-05	Mounting Bracket-LH			x	x
71	48014-06	Wave Washer			x	x
72	*	Set Screw 3/8-16x3/4 Flat Point			x	x
73	48014-02	Arm Rest Kit (Incl.67-72,78) [Optional 12/13]	x	x		
74	04041-11	Washer, 13/32 x 1-1/2 x 7 Ga.	x	x		
75	45111	Seat Plate Wld.	x	x	x	x
76	*	Lockwasher, 5/16 Spring	x	x	x	x
77	*	Hex Head Bolt, 5/16-18 x 3/4	x	x	x	x
78	42026	Seat Suport Spring	x	x	x	x
79	*	Hex Head Bolt, 3/8-16 x 1	x	x	x	x
80	*	Washer, 13/32 x 13/16 x 16 Ga.	x	x	x	x
81	*	Hex Head Bolt, 7/16-14 x 1-1/2	x	x	x	x
82	*	Lockwasher, 7/16 Spring	x	x	x	x
83	42366	Reinforcement, seat spring	x	x	x	x

* Common hardware purchased locally.

All bolts Grade 5 plated, all other fasteners zinc plate.

WINCH LIFT SYSTEM

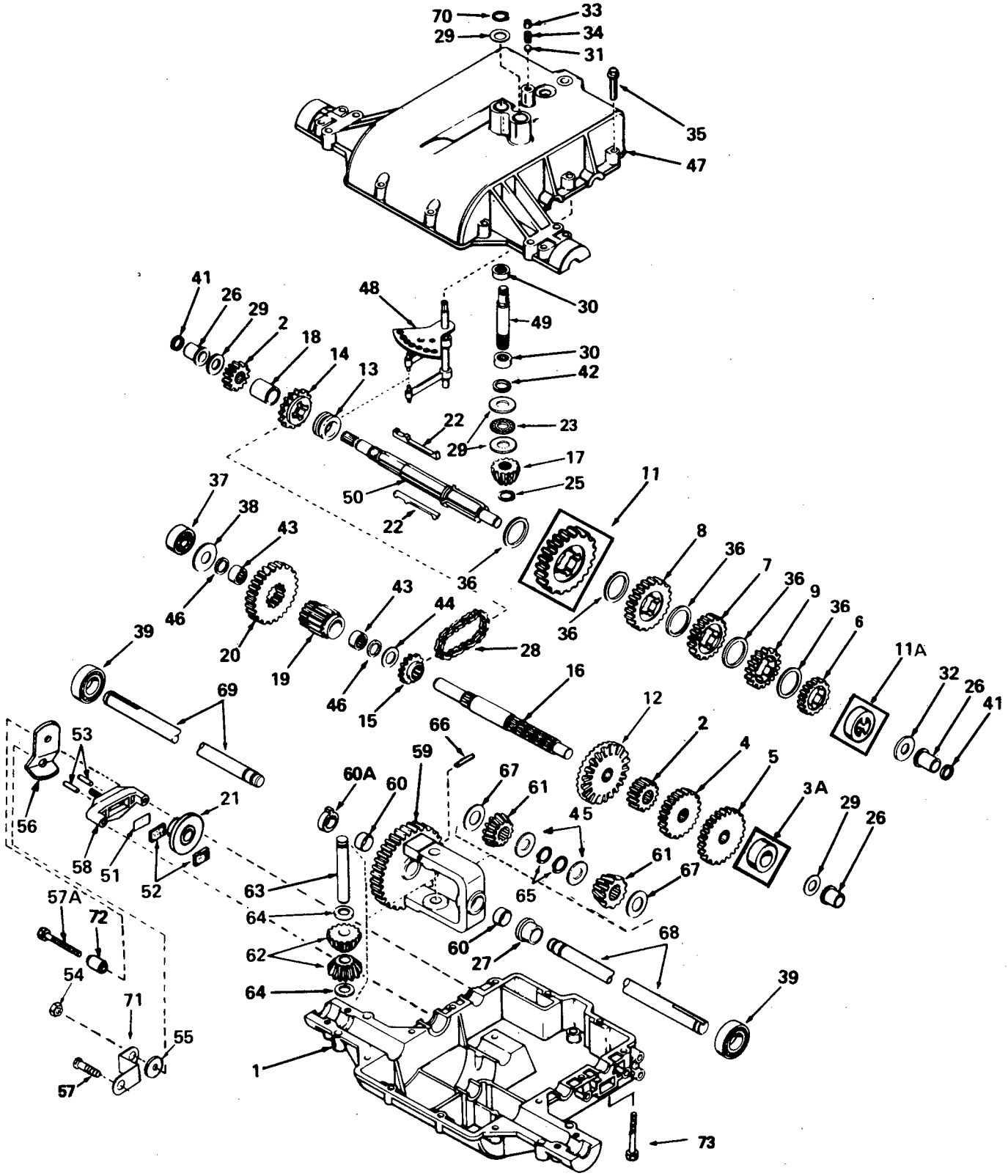


WINCH LIFT SYSTEM

REF. NO.	PART NUMBER	DESCRIPTION	ALL UNITS
1	48043	Winch Assembly (incl.1-8,10-20)	x
2	204009	Shaft Bushing	x
3	205116	E-Ring	x
4	304228	Drive Shaft	x
5	204362	Pressure Plate	x
6	404164	Ratchet Wheel	x
7	404163	Pressure Washer	x
8	204359	Shaft Bushing	x
9	48044	Winch Handle	x
10	204364	Handle Spring	x
11	205015	Handle Nut	x
12	205011	Hex Locknut, 3/8-16	x
13	205008	Reel Shaft	x
14	205155	Lock Nut, 7/16-14	x
15	304227	Winch Reel	x
16	204363	Ratchet Spring	x
17	404166	Ratchet Spacer	x
18	404409	Ratchet Pawl	x
19	205024	Flat Washer	x
20	205167	Ratchet Bolt	x
21	48045	Winch Cable Assembly	x
22	42127	Cable Guide	x
23	04021-03	Hex Lock Nut, 1/4-28	x

TRANSAXLE ASSEMBLY
fOR 16" WHEELS ONLY

PEERLESS 800-034D



TRANSAXLE ASSEMBLY
FOR 16" WHEELS ONLY

See Page 24 for Illustration

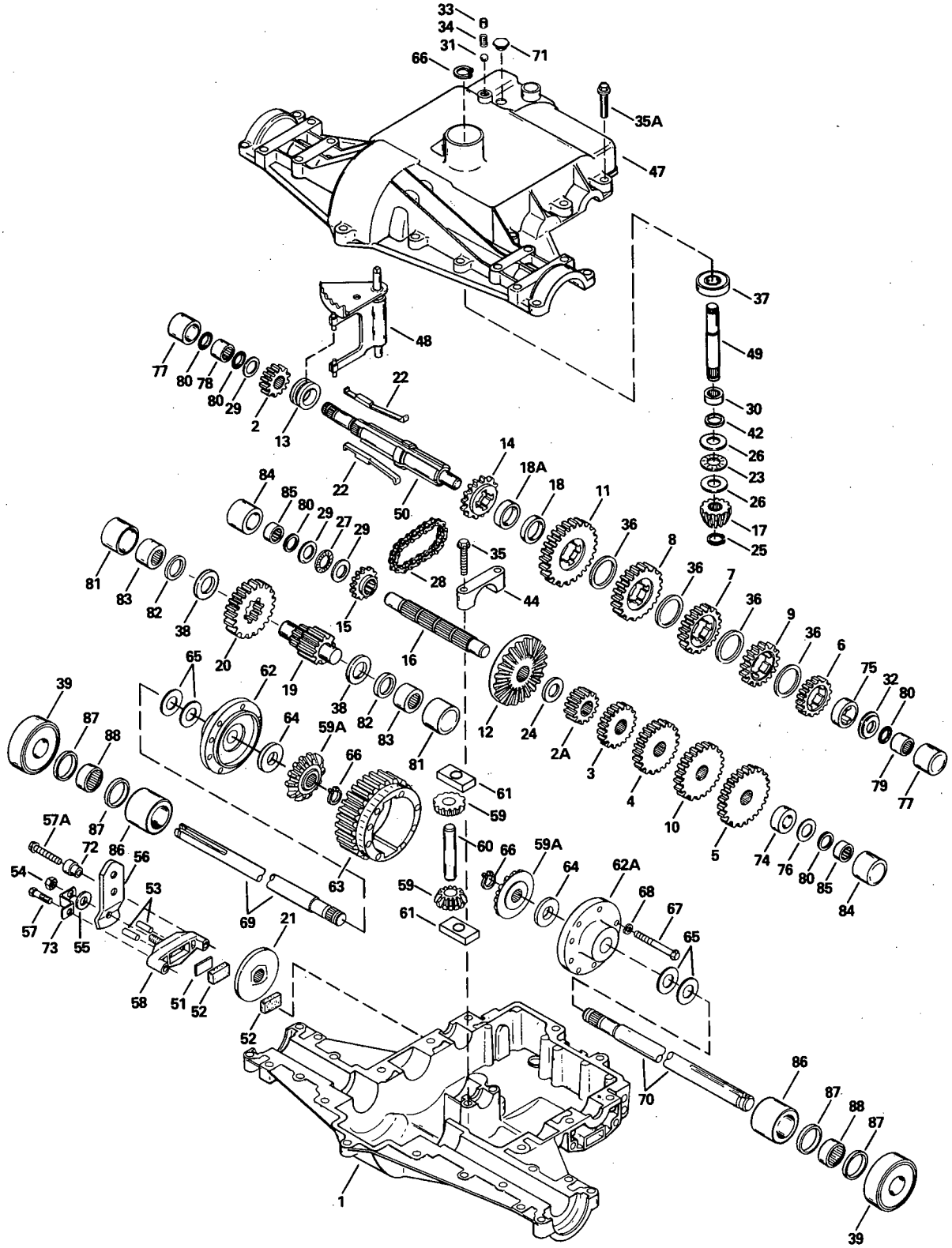
REF. NO.	PART NUMBER	DESCRIPTION	ST 12B	ST 13K
1	770071a	Case, Transaxle	x	x
2	778136	Gear, Spur (15 teeth)	x	x
3A	786071	Spacer	x	x
4	778200	Gear, Spur (20 Teeth)	x	x
5	778202	Gear, Spur (28 Teeth)	x	x
6	778203	Gear, Spur (22 Teeth)	x	x
7	778205	Gear, Spur (30 Teeth)	x	x
8	778206	Gear, Spur (35 Teeth)	x	x
9	778204	Gear, Spur (25 Teeth)	x	x
11	778207	Gear, Spur (37 Teeth)	x	x
11a	786072	Spacer	x	x
12	778154	Gear, Bevel (42 Teeth)	x	x
13	784266	Collar, Shift	x	x
14	786083	Sprocket (18 Teeth)	x	x
15	786082	Sprocket (9 Teeth)	x	x
16	776204	Shaft, Counter	x	x
17	778176	Bevel Pinion, Input	x	x
18	786074	Spacer	x	x
19	778138	Pinion, Output	x	x
20	778139	Gear, Output	x	x
21	790003	Disc, Brake	x	x
22	792089A	Key	x	x
23	780071	Bearing, Thrust	x	x
25	788040	Ring, Retaining	x	x
26	780105A	Bushing, Flanged	x	x
27	780118A	Bushing, Flanged	x	x
28	786081	Chain, Roller (No. 41 Chain, 24 Links)	x	x
29	780072	Washer, Thrust	x	x
30	780122	Bearing, Needle	x	x
31	792077	Ball, Steel	x	x
32	780139	Washer, Thrust	x	x
33	792078	Screw, Set, 3/8-16 x 3/8	x	x
34	792079	Spring	x	x
35	792073	Screw, HexHd.Thrd.Frm,1/4-20x1-1/4	x	x
36	780108	Washer, Thrust	x	x
37	780121	Bearing, Ball	x	x
38	780113	Washer, Flat	x	x
39	780119	Bearing, Ball	x	x
41	788051	Ring, Square Cut	x	x
42	788057	Ring, Square Cut	x	x
43	780112	Bearing, Needle	x	x
44	780114	Washer, Flat	x	x
45+	780114	Washer	x	x
46	788053	Ring, Square Cut	x	x
47	772084	Cover, Transaxle	x	x
48	784290	Rod & Fork Assembly, Shift	x	x
49	776135	Shaft, Input	x	x
50	776183A	Shaft Brake	x	x
51	790007	Plate, Brake Pad	x	x
52	790006	Pad, Brake	x	x
53	786026	Pin, Dowel	x	x
54	792075	Locknut, 5/16-24	x	x
55	792076	Washer, Flat	x	x
56	790016	Lever, Brake	x	x
57	792073	Screw,Hex Hd.Thrd.Frm,1/4-20x1-1/4	x	x
57A	792085	Screw,Hex Hd.Thrd.Frm.1/4-20x2-1/4	x	x
58	790025	Holder, Brake Pad	x	x
59	778175	Gear Assembly, Diff (Incl.2 of No.60)	x	x
60	780064	Bushing	x	x
60A	780120	Bushing	x	x
61	778166	Gear, Bevel	x	x
62	778131	Pinion, Bevel	x	x
63	786034	Pin, Drive	x	x
64	780065	Washer, Thrust	x	x
65+	792109	Ring, Retaining	x	x
65	792018	Ring, Retaining	x	x
66	792040	Pin, Roll	x	x
67	780001	Washer, Thrust	x	x
68+	774621	Axle (22-5/8" Long)	x	x
68	774668	Axle (22-5/8" Long)	x	x
69+	774620	Axle (12-7/8" Long)	x	x
69	774667	Axle (12-7/8" Long)	x	x
70	792035	Ring, Retaining	x	x
71	786086	Bracket, Brake Lever	x	x
72	786092	Spacer	x	x
73	04007	Special Bolt	x	x
	788067	Gear Grease, Bentonite	x	x
	48160	Transaxle Assy., Complete	x	x

+Required only with these axles that have machined down diameter in snap-ring area:

774558 - 25-1/4" Long
774506 - 13-1/4" Long
774621 - 22-5/8" Long
774620 - 12-7/8" Long

TRANSAXLE ASSEMBLY
FOR 18" WHEELS ONLY

PEERLESS 820-003

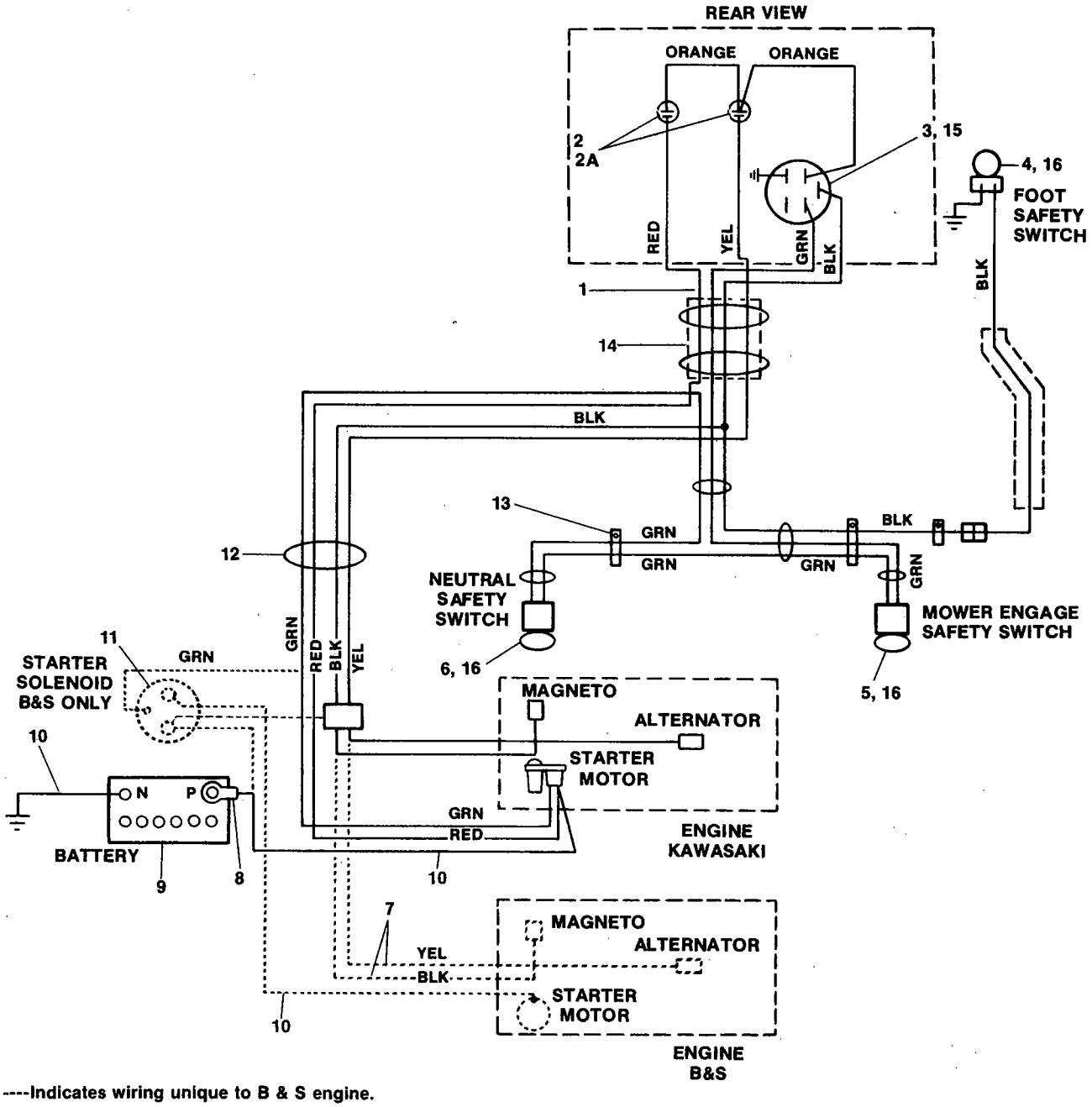


TRANSAXLE ASSEMBLY
fOR 18" WHEELS ONLY

See Page 26 for Illustration

REF. NO.	PART NUMBER	DESCRIPTION	QTY. REQ.
1	770088	CASE, TRANSAXLE	1
2	778136	GEAR, SPUR (15 TEETH)	1
2A	778211	GEAR, SPUR (12 TEETH)	1
3	778199	GEAR, SPUR (15 TEETH)	1
4	778200	GEAR, SPUR (20 TEETH)	1
5	778202	GEAR, SPUR (28 TEETH)	1
6	778203	GEAR, SPUR (22 TEETH)	1
7	778205	GEAR, SPUR (30 TEETH)	1
8	778206	GEAR, SPUR (35 TEETH)	1
9	778204	GEAR, SPUR (25 TEETH)	1
10	778201	GEAR, SPUR (25 TEETH)	1
11	778207	GEAR, SPUR (37 TEETH)	1
12	778246	GEAR, BEVEL (33 TEETH)	1
13	784216	COLLAR, SHIFT	1
14	786123	SPROCKET (18 TEETH)	1
15	786082	SPROCKET (9 TEETH)	1
16	776276	SHAFT, COUNTER	1
17	778245	BEVEL PINION, INPUT (13 TEETH)	1
18	786122	SPACER, NEUTRAL (.276/.268 THICK)	1
18A	786121	SPACER, NEUTRAL (.350/.340 THICK)	1
19	776275	SHAFT, OUTPUT (9 TEETH)	1
20	778247	GEAR, OUPUT (35 TEETH)	1
21	790043	DISC, BRAKE	1
22	792123A	KEY	4
23	780084	BEARING, THRUST	1
24	780051	WASHER, THRUST	1
25	788040	RING, RETAINING	1
26	780154	RACE, THRUST	2
27	780071	BEARING, THRUST	1
28	786081	CHAIN, ROLLER (NO.41 CHAIN, 24 LINKS)	1
29	780072	WASHER, THRUST	3
30	780155	BEARING, NEEDLE	1
31	792077	BALL, STEEL	1
32	780139	WASHER, THRUST	1
33	792078	SET SCREW, 3/8-16X3/8	1
34	792079	SPRING	1
35	792073	SCREW, FLNG. HEX HD.1/4-20X1 1/4	2
35A	792129	SCREW, HEX HD. 5/16-18X1 1/4	17
36	780108	WASHER, THRUST	4
37	780119	BEARING, BALL	1
38	780128	WASHER, THRUST	2
39	780050	BEARING, BALL	2
42	788042	SEAL, OIL	1
44	786131	CAP, BEARING	1
47	772097	COVER, TRANSAXLE (INCL.30, 37, & 42)	1
48	784342	ROD & FORK ASSY., SHIFT	1
49	776274	SHAFT, INPUT	1
50	776277	SHAFT, BRAKE	1
51	790007	PLATE, BRAKE PAD	1
52	790006	PAD, BRAKE	2
53	786026	PIN, DOWEL	2
54	792075	LOCK NUT,5/16-24	1
55	792076	WASHER, FLAT	1
56	790014	LEVER, BRAKE	1
57	792073	SCREW, FLG HEX HD. 1/4-20X1 1/4	1
57A	792085	SCREW, FLG HEX HD. 1/4-20X2 1/4	1
58	790025	HOLDER, BRAKE PAD	1
59	778197	PINION, DIFFERENTIAL, BEVEL	2
59A	778198	GEAR, BEVEL	2
60	786019	PIN, DRIVE	1
61	786027	BLOCK, DRIVE	2
62	774028A	CARRIER, DIFFERENTIAL	1
62A	774029A	CARRIER, DIFFERENTIAL	1
63	778248	GEAR, RING (31 TEETH)	1
64	780107	WASHER	2
65	780042	WASHER, THRUST	4
66	792018	RING, SNAP	2
67	792020	SCREW, HEX HD., 1/4-20X 2 1/4"	4
68	792006	LOCKWASHER, 1/4"	4
69	774796	AXLE (12 1/4" LONG)	1
70	774795	AXLE (26 1/4" LONG)	1
71	792074	PLUG HEX HD., 9/16-18	1
72	786092	SPACER	1
73	786086	BRACKET, BRAKE LEVER	1
74	786071	SPACER	1
75	786072	SPACER	1
76	780153	WASHER	1
77	786129	SLEEVE	2
78	780150	BEARING, NEEDLE	1
79	780152	BEARING, NEEDLE (CAPPED)	1
80	792001	"O" RING	5
81	786127	SLEEVE	2
82	788071	RING, SQUARE CUT	2
83	780049	BEARING, NEEDLE (CAPPED)	2
84	786128	SLEEVE	2
85	780151	BEARING, NEEDLE (CAPPED)	2
86	786130	SLEEVE	2
87	788070	RING, SQUARE CUT	4
88	780031	BEARING NEEDLE	2

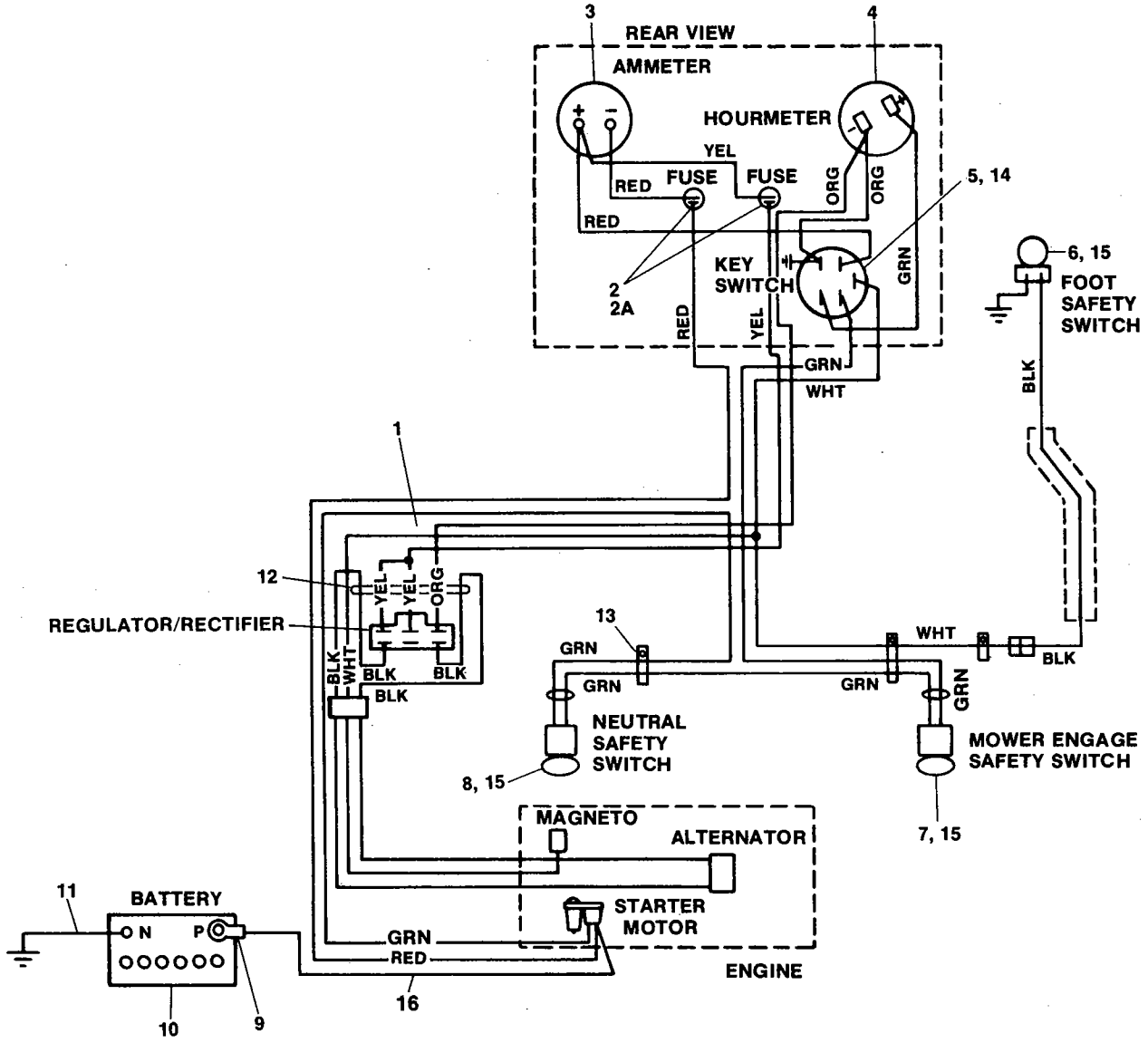
ELECTRICAL SYSTEM
ST 12B & ST 13K



----Indicates wiring unique to B & S engine.

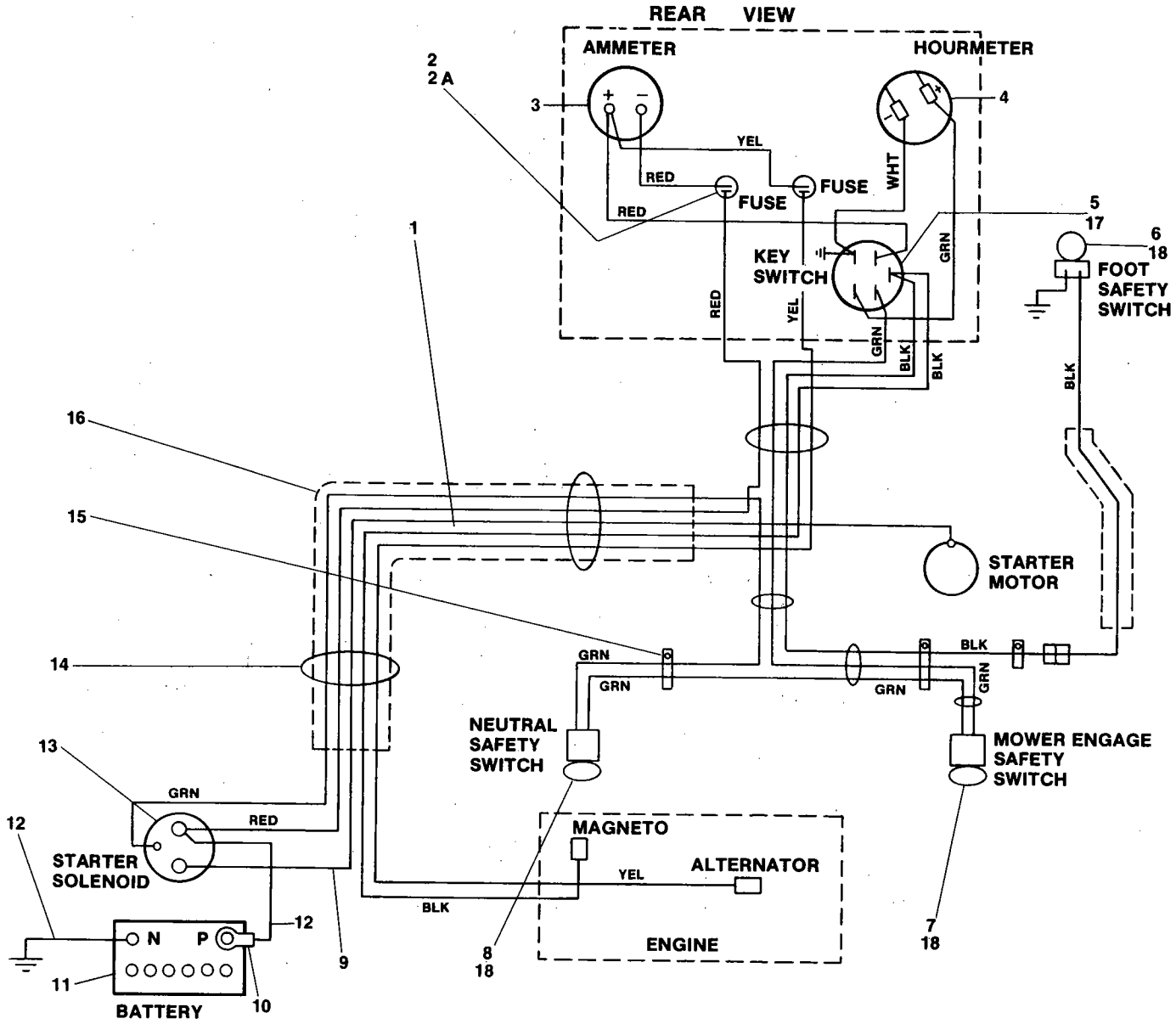
REF. NO.	PART NUMBER	DESCRPITION	REF. NO.	PART NUMBER	DESCRPITION
1	48166	Wiring Harness, Complete	9	48015	Battery
2	48024	Fuse Holder	10	48029-01	Battery Cable
2A	48025	Fuse	10	48029-03	Battery Cable, Red
3	48017	Key Switch	11	48016	Starter Solenoid, B&S Only
4	48026	Foot Safety Switch	12	48028	Cable Tie
5	48019	Mower Engage Safety Switch	13	48030	Cable Clamp
6	48021	Neutral Safety Switch	14	48033	Plastic Conduit
7	48174	Harness Adapter, B&S Only	15	48018	Connector, Starter Switch
8	48126	Rubber Boot	16	48020	Connector, Safety Switch

ELECTRICAL SYSTEM
ST 17KA



REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
1	48252	Wiring Harness Complete	9	48126	Rubber Boot
2	48024	Fuse Holder	10	48015	Battery
2A	48025	Fuse, 20A	11	48029-01	Battery Cable
3	48022	Ammeter	12	48028	Cable Tie
4	48023	Hour Meter	13	48030	Cable Clamp
5	48017	Key Switch	14	48018	Connector, Starter Switch
6	48026	Foot Safety Switch	15	48020	Connector, Safety Switch
7	48019	Mower Engage Safety Switch	16	46029-02	Battery Cable, Red
8	48021	Neutral Safety Switch			

ELECTRICAL SYSTEM
ST 18KH



REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
1	48259	Wiring Harness, Complete	10	48126	Rubber Boot
2	48024	Fuse Holder	11	48015	Battery
2A	48025	Fuse, 20	12	48029-01	Battery Cable
3	48022	Ammeter	13	48016	Starter Solenoid
4	48023	Hour Meter	14	48028	Cable Tie
5	48017	Key Switch	15	48030	Cable Clamp
6	48026	Foot Safety Switch	16	48033	Plastic Conduit
7	48019	Mower Engage Safety Switch	17	48018	Connector, Starter Switch
8	48021	Neutral Safety Switch	18	48020	Connector, Safety Switch
9	48029-02	Battery Cable			

REPLACEMENT DECALS

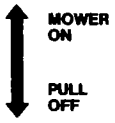
SCAG

48314 Decal — **Scag's Logo**
Located on cutter deck - top surface.

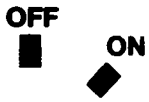
DANGER
ROTATING BLADES AND BELTS
• KEEP HANDS, FEET & CLOTHING CLEAR
• KEEP ALL GUARDS IN PLACE
• SHUT OFF ENGINE & DISENGAGE BLADE CLUTCH BEFORE SERVICING
• CLEAR AREA OF DEBRIS BEFORE MOWING
• USE CAUTION IN DIRECTING DISCHARGE
• KEEP BYSTANDERS, CHILDREN & PETS AWAY
• READ INSTRUCTION MANUAL BEFORE OPERATING

48073 Decal — **Danger-Rotating Blades**
Located on cutter deck cover or deck top near discharge chute.

48071 Decal — **O.P.E.I. Safety**
Located on cutter deck near discharge chute.



48078 Decal — **Engage Mower**
Located on console panel - lower L.H. corner.



48079 Decal — **Key Switch**
Located on console panel - above key switch.

IMPORTANT
• ALWAYS TRANSPORT WITH CUTTER DECK DOWN AND LIFT CABLE SLACK.
• MOW WITH WINCH CABLE SLACK TWO FULL TURNS.
• FOR SMOOTH TURNS DEPRESS FOOT CLUTCH PEDAL SLIGHTLY.

48048 Decal — **Transport Down**
Located on console support channel.

48317 Decal — **Mower Deck 40**

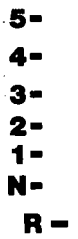
48318 Decal — **Mower Deck 48**

48320 Decal — **Mower Deck 61**

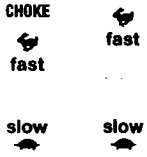
YOU MUST USE CLUTCH WHEN SHIFTING TO AVOID GEAR DAMAGE.

48147 Decal — **Declutch**
Located on console panel - R.H. side.

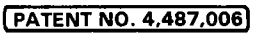
48072 Decal — **Heavy Duty Commercial**
Located on battery cover.



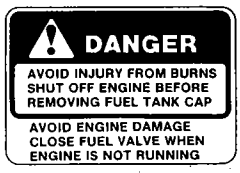
48074 Decal — **Shifter Index**
Located on shift quadrant weldment.



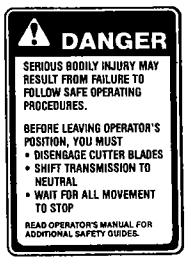
48186 Decal — **Throttle - ST-12B, ST-13K, ST-17KA**
48076 Decal — **Throttle - ST-18B, ST-18KH**
Located on console panel - near throttle control.



48182 Decal — **Patent**
Located on top of engine deck - rear L.H. corner.



48281 Decal — **Gasoline**


DANGER
SERIOUS BODILY INJURY MAY RESULT FROM FAILURE TO FOLLOW SAFE OPERATING PROCEDURES.
BEFORE LEAVING OPERATOR'S POSITION, YOU MUST
• DISENGAGE CUTTER BLADES
• SHIFT TRANSMISSION TO NEUTRAL
• WAIT FOR ALL MOVEMENT TO STOP
READ OPERATOR'S MANUAL FOR ADDITIONAL SAFETY GUIDES.

48222 Decal — **Operator Warning**

48008 Touch Up Paint, **Scag's Gold, Aerosol Can**

PLEASE BE CAREFUL

1. Keep all shields in place, especially grass discharge guard.
2. Stop machine and remove spark plug wire to adjust or service.
3. When mechanism becomes clogged, stop engine before cleaning.
4. Keep hands, feet and clothing away from power-driven parts.
5. Keep off implement unless seat or platform is provided.
6. Keep others off of the tractor (only one person at a time).

REMEMBER – YOUR MOWER IS ONLY AS SAFE AS THE OPERATOR!

FAILURE TO FOLLOW CAUTIOUS OPERATING PRACTICES MAY RESULT IN SERIOUS BODILY INJURY. BESIDES, WE WOULD LIKE YOU TO CONTINUE TO ENJOY AND PROFIT BY USING OUR PRODUCTS.

OWNER REFERENCE

TRACTOR MODEL_____

TRACTOR SERIAL NUMBER_____

MOWER MODEL _____

MOWER SERIAL NUMBER_____